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**SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549



**FORM 6-K**

Report of Foreign Issuer Pursuant to Rule 13a-16 or 15d-16  
of the Securities Exchange Act of 1934  
March 1, 2002



**NOVO NORDISK A/S**

(Exact name of Registrant as specified in its charter)

Novo Allé  
DK- 2880, Bagsvaerd  
Denmark

(Address of principal executive offices)

PROCESSED

MAR 21 2002

THOMSON  
FINANCIAL

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F

Form 20-F ☒ X

Form 40-F \_\_\_\_\_

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes \_\_\_\_\_

No ☒ X

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g-32(b):82-\_\_\_\_\_

## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf of the undersigned, thereunto duly authorized.

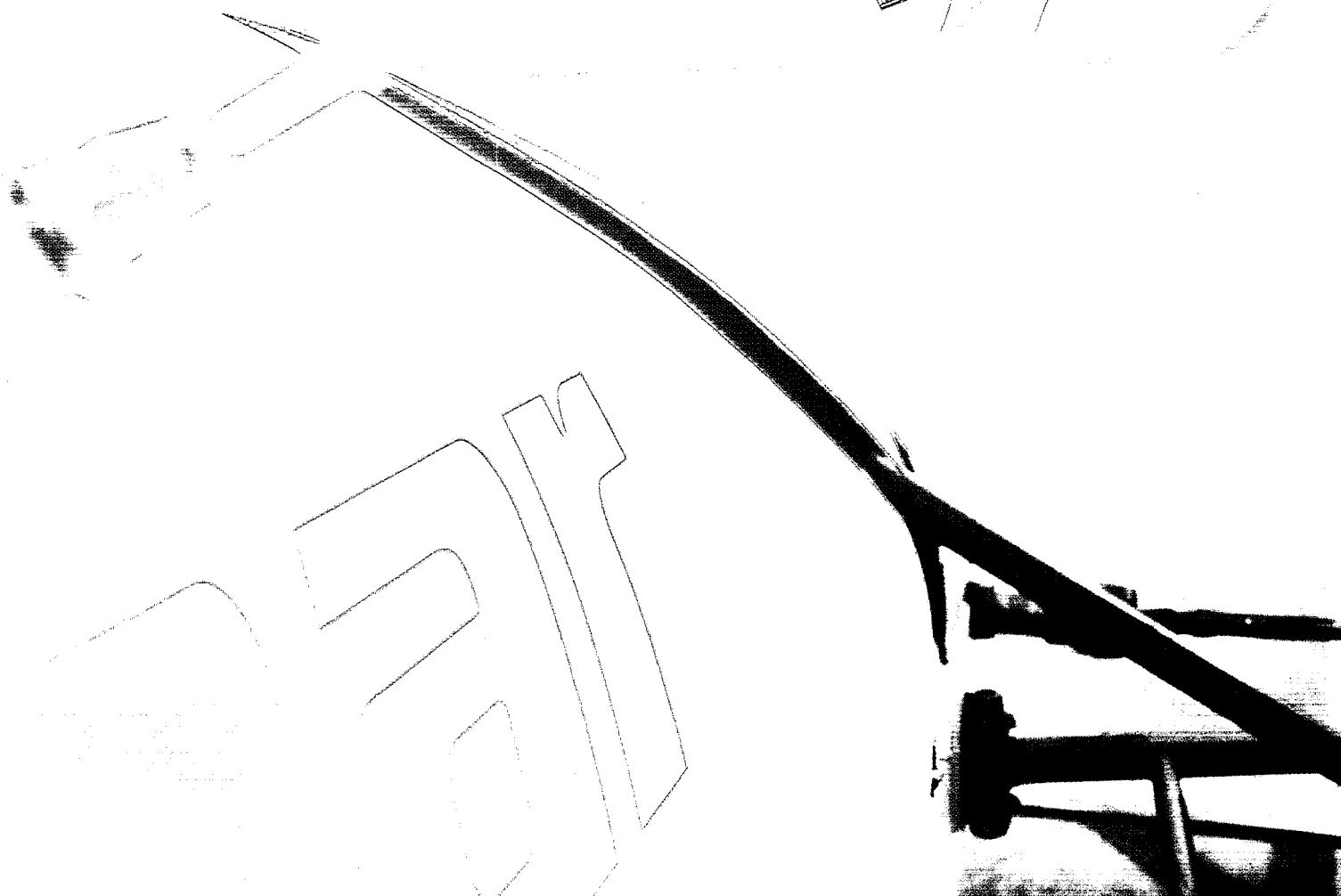
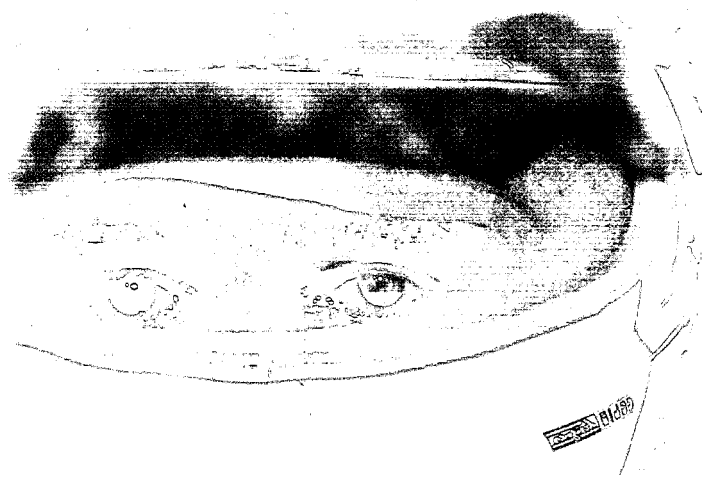
Date: 3/1/2002

NOVO NORDISK A/S



Lars Reben Sørensen, President and Chief Executive Officer





# Research and development pipeline

Selected development projects at Novo Nordisk

## PHASE 1

The substance is tested in healthy human volunteers.

### NN414

An oral hypoglycaemic agent for the treatment of Type 2 diabetes. The substance will be tested for its effect on insulin secretion.

### NN344

A neutral, soluble long-acting human insulin analogue with 24-hour coverage by once daily injection. NN344 has a very flat and predictable action profile. The product is intended for basal insulin treatment of diabetes.

## PHASE 2

The first administration of the substance takes place in patients for evaluation of efficacy and tolerance in short-term treatment.

### NN1998 (AERx®iDMS)

A pulmonary delivery system for the administration of insulin by inhalation. NN1998 is being developed for the treatment of diabetes in collaboration with Aradigm Corporation. Phase 2 trials have been concluded and Phase 3 trials are expected to be initiated in 2002.

### NN2344

A very potent insulin sensitiser that increases glucose uptake in peripheral tissue. The sensitiser is licensed from Dr Reddy's Research Foundation.

### NN2211 (GLP-1)

A long-acting derivative of the natural hormone GLP-1, that glucose-dependently stimulates insulin production and lowers the level of the anti-insulin hormone glucagon. Furthermore, the potential effect of NN2211 on appetite regulation and weight control is being studied.

### NovoSeven® general haemostasis

A programme to explore the use of NovoSeven® as a general haemostatic agent, including

- Liver transplantations.
- Liver resections.
- Liver resections in chronic liver disease.
- Upper gastro-intestinal bleeds.
- Central nervous system bleeds.
- Bleedings caused by anticoagulant therapy.
- Stem cell transplantations.

## PHASE 3

The substance is tested in a large number of patients for evaluation of efficacy and adverse effects in long-term treatment.

### NN304 (insulin detemir)

Soluble, neutral, basal insulin analogue with a novel protraction principle based on albumin binding within the subcutis and bloodstream. NN304 is expected to provide an improved basal insulin profile without peak effect and with less day-to-day variation compared to conventional NPH insulin preparations. Clinical trials have shown a significantly lower frequency of hypoglycaemic events compared with NPH. NN304 can be used for treatment of Type 1 and Type 2 diabetes.

### NN622

A second-generation insulin sensitiser discovered in collaboration with Dr Reddy's Research Foundation. In addition to lowering blood glucose, NN622 is interesting due to its favourable effects on the lipid profile.

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Cover photo: Ricardo Carrerio (Type 1 diabetes), Brazil.

## To all our stakeholders,

We can look back with satisfaction on 2001 as Novo Nordisk's first year as a focused healthcare company, after having demerged our enzyme business into a separate company, Novozymes A/S, in November 2000.

It was also a year in which the terrorist attack of 11 September made us reflect not only on the tragic loss of life, but on the threat and the promise implied in our increasingly globalised world. We must create or seize the opportunities that an interconnected world offers a responsible corporation in the knowledge that we will be caught in the harsh spotlight of growing public concern or resentment towards corporate power and wealth.

We are a company that puts people – not only our customers but also our employees and fellow citizens – at the forefront of its guiding philosophy. This is something we have always believed in and endeavoured to live by.

Listening to and letting ourselves be duly guided by those whom we serve and the people we work with is a condition for growing our business and creating long-term value. A commitment to the social, bioethical and environmental aspects of how we do business is just as vital as meeting our economic goals. This is what we call sustainable management, documented in our Triple Bottom Line reporting.

The year 2001 will also be remembered for the unprecedented focus on the role of the pharmaceutical industry in ensuring access to proper medical treatment in developing countries. The pharmaceutical industry was challenged on its belief that protection of patents and intellectual property rights benefits not only corporations, but also current and future generations who depend on the creation of life-saving drugs. That challenge gave us a valuable opportunity to reflect further on our role as a responsible healthcare company. We concluded that it is possible to balance the protection of intellectual property rights with improved access to essential medicines for patients in developing countries.

In fact, given our promise of 'being there' for our customers, we believe Novo Nordisk has an obligation to contribute to better access to proper diabetes care in the poorest nations. To that effect, in November 2001 we announced plans to establish the World Diabetes Foundation, which is part of a broader Novo Nordisk initiative known as LEAD – Leadership in Education and Access to Diabetes care.

**FINANCIAL PERFORMANCE IN 2001** We are pleased to report that Novo Nordisk performed very well in its first year as a focused healthcare company. Operating profit grew by 17% to DKK 5,614 million primarily due to sales growth of 14% to DKK 23,776 million. Measured in local currencies sales increased by 17%. Net profit grew by 25% to DKK 3,865 million.

Our overall business focus remains unchanged: we aim for world leadership in diabetes care while pursuing opportunities in three other areas: haemostasis management, growth hormone therapy and hormone replacement therapy (HRT). All four areas contributed to our growth in 2001:

- Diabetes care sales were up 14% to DKK 16,624 million.
- Sales within haemostasis management were up 36% to DKK 3,096 million.



Mads Øvlisen and Lars Rebien Sørensen.

- Sales within growth hormone therapy were up 3% to DKK 2,164 million.
- HRT sales were up 10% to DKK 1,435 million.

**ENVIRONMENTAL AND SOCIAL PERFORMANCE** In Novo Nordisk we have a long-standing commitment to the Triple Bottom Line – social and environmental responsibility and economic viability.

We strongly believe that in order to run a sustainable business, we must be able to demonstrate that we deliver not only economic value for our shareholders, but also value for our other stakeholders, be they customers, employees, neighbours or society at large.

To document our performance, we issue annual reports on the Triple Bottom Line, in which we highlight the many difficult issues confronting Novo Nordisk as a global player, as an employer and business partner, and as a representative of the pharmaceutical industry. Key issues include:

- Access to health, with particular focus on the developing world.
- Equal opportunities and diversity in the workplace.
- Extending social responsibility through the supply chain.
- Animal welfare and bioethics from idea to products.
- Eco-efficiency in the light of increasing production.
- Assessing the socio-economic impact of the company's activities in a global context.

The report accounts for our performance within each of these areas during 2001 and a range of new initiatives launched to address the issues in a long-term perspective.

### INVESTMENT IN RESEARCH AND DEVELOPMENT

Research and development is crucial for our ability to fulfil our mission in an increasingly competitive business environment. In 2001, we spent DKK 3,970 million on new product discovery and development.

- We established a new unit, Protein Delivery Systems, to develop innovative methods of delivering insulin and other therapeutic proteins.
- Clinical proof of concept was obtained in September 2001 for NN622, a second generation insulin sensitiser with a dual action.
- Our pulmonary insulin delivery device, AERx®IDMS (NN1998), developed jointly with Aradigm Corporation, successfully completed a Phase 2b study in November 2001.
- We initiated a number of clinical trials for NovoSeven® in a range of blood disorders and bleeding conditions.

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→ **INVESTMENT IN FACILITIES** In 2001, the company invested DKK 3.8 billion in new facilities. Due to the continued positive development in our business and the significant opportunities provided by our product candidates in late stage development, we expect investments to remain at this elevated level also in 2002 and 2003. Our largest investment projects are:

- The new Insulin Bulk Plant in Kalundborg, Denmark will be our primary supplier of insulin products for many years to come.
- The new NovoSeven® plant in Hillerød, Denmark will be the second factory for NovoSeven®.
- The MS-Fac2 plant in Hillerød, Denmark is designed for the production of durable insulin delivery devices.
- The device plant in Hillerød, Denmark has been extended to also produce the latest prefilled pen, FlexPen®.

**MAJOR AGREEMENTS** In January 2001 Novo Nordisk and Aventis Pharma signed an agreement, settling the lawsuit filed by Novo Nordisk in April 2000 in Germany for patent infringement relating to the long-acting insulin analogue Lantus®. This agreement increased Novo Nordisk's operating profit in 2001 by approximately DKK 250 million. Contingent on the commercial development of Lantus®, the agreement could also have a positive impact on Novo Nordisk's results in 2003 and 2004.

In July 2001 Novo Nordisk and Novartis Pharma AG announced an agreement on the commercialisation of NN622, which gave Novartis exclusive rights to commercialise the compound in the US, Canada and Mexico. However, in October 2001 Novartis decided for strategic reasons not to continue with the collaboration. The development programme for NN622 is unaffected and Phase 3 trials have been initiated.

In October 2001 Novo Nordisk invested USD 20 million in the Aradigm Corporation common shares. As part of the agreement, Novo Nordisk will retain all of the Aradigm shares held by it for at least 2 years. In addition, following the completion of a Phase 2b clinical trial with the AERx® insulin Diabetes Management System (iDMS) in November 2001, Novo Nordisk increased its commitment to further invest in the Aradigm Corporation with

a new share investment agreement of up to USD 25 million in common shares.

In December 2001 Novo Nordisk signed an agreement whereby Novo Nordisk would acquire the controlling shareholding of Biobrás SA in Brazil. The acquisition was completed on 31 January 2002 after the existing shareholders had approved implementing a demerger of certain non-core assets of Biobrás. The acquisition gives Novo Nordisk 76% of the voting shares of Biobrás and 39% of the total capital. As previously announced, Novo Nordisk plans to submit a tender offer for all the remaining shares of Biobrás, and then de-list the company from the São Paulo Stock Exchange. The acquisition is anticipated to be approved by the Brazilian competition authorities during 2002.

**CORPORATE GOVERNANCE** In December 2001 the Nørby Committee, established by the Danish government in March 2001, presented its recommendations for good Corporate Governance in Denmark. Novo Nordisk has for a number of years been in compliance with most of these recommendations.

The corporate governance guidelines include a recommendation for companies, which in their articles of association have voting rights differentiation on shares, to evaluate the expediency of such voting rights restrictions. Novo Nordisk is of the opinion that the current ownership structure has been, and continues to be appropriate and preferable for the long-term development of the company. A revocation of the current voting rights differentiation of Novo Nordisk's shares cannot be implemented, as this would require a change to the Articles of Association of the Novo Nordisk Foundation with the consent of the Danish foundation authorities.

Novo Nordisk publishes, in full, information regarding its share-based incentive programmes for members of the Executive Committee. For the Executive Committee and the Board of Directors, each defined as a group, Novo Nordisk discloses information about holding of shares. Novo Nordisk has for 2001, however, decided not to disclose information about members' individual holding of shares in the company.

## DIABETES CARE

### Growth in insulin business

Diabetes care is our largest area of interest. Insulin, insulin analogues and devices for injection of insulin constitute 91% of the sales in this area, the remainder is accounted for by NovoNorm® (Prandin® in the US), our oral treatment for Type 2 diabetes.

In 2001 diabetes care sales grew by 14%, with the insulin business growing 13%, and NovoNorm®/Prandin® growing 29%. Our insulin market share in the industrialised world is 45.0%.

The growth in insulin sales is due to volume growth and a change in product mix towards more advanced products such as our rapid-acting insulin analogue NovoRapid® (NovoLog® in the US). High

sales growth was realised in Europe, the US and in a number of developing countries. Reported sales in Japan measured in DKK were flat due to the depreciation of the JPY and increased competition.

Sales growth in the US was to a large degree driven by the co-marketing agreement with Wal-Mart effective from August 2000, under which our insulin in vials are marketed with the shared Novolin® ReliOn® brand name. In addition, Novation, the Texas-based supply chain management company, awarded a significant contract to us in September 2001 to supply its full line of diabetes products to Novation customers. Finally in the US, the leading health improvement company AdvancePCS, in October 2001 announced that it has selected our diabetes products for inclusion on its Preferred Drug List (PDL). AdvancePCS serves 75 million health plan members, managing

more than USD 21 billion annually in prescription drug spending.

We continued to roll out NovoRapid®/NovoLog®, which was launched in the US in September and in Japan in December. NovoRapid® has been very well received by the market.

We launched two new devices for insulin injection therapy: InDuo®, the world's first combined insulin injection system and blood glucose monitor, which we produce and market together with Lifescan Inc; and FlexPen® a new prefilled insulin pen, which is expected to replace our popular NovoLet® pen. We continued the roll-out of InnoLet® and Innoovo®, two popular insulin dosers, targeting different segments of insulin users.

Sales of NovoNorm®/Prandin® increased by 29% to DKK 1,401 million reflecting sales growth in all major markets. Sales in the US mirrored the underlying market

**HOLDING OF OWN SHARES AND REDUCTION IN SHARE CAPITAL** As of 31 December 2001, Novo Nordisk's holding of its own shares (treasury shares) was 8,017,323 B shares, representing 2% of the total share capital. As of 7 February 2002, Novo Nordisk's holding of its own shares was 8,017,323 B shares. The total number of shares repurchased during 2001 was 87,500 B shares. A total of 1,127,337 B shares were sold as part of existing incentive programmes to management and the employee share programme during 2001.

In order to maintain capital structure flexibility, it was decided at the Annual General Meeting in March 2001 to reduce the B share capital by cancellation of nominally DKK 45 million of own B shares, which corresponds to approximately 6% of the total share capital.

**EMPLOYEE SHARE PROGRAMMES** In May 2001 the Board of Directors decided to implement a global share programme for the employees in Novo Nordisk A/S and its affiliates. Each employee was offered the possibility to buy up to 100 B shares at DKK 100 per share. In Denmark the programme has been executed in November 2001 and 991,591 B shares were sold to the employees. Outside of Denmark the shares will be offered to the employees in the first quarter of 2002.

**DIVIDEND POLICY AND SHARE PERFORMANCE** At the Annual General Meeting on 12 March 2002, the Board of Directors will propose a dividend for 2001 of DKK 3.35 per share of DKK 2, up from DKK 2.65 per share in 2000, corresponding to an increase in dividend paid of 26%. No dividend will be paid on the company's holding of own shares.

During 2001 Novo Nordisk B shares listed on Copenhagen Stock Exchange were up 20%, whereas the ADRs listed in New York were up 13%.

**LONG-TERM FINANCIAL TARGETS** We maintain the long-term financial targets we established last year, which we believe reflect competitive financial performance in our industry in the

coming years. The targets are:

- Operating profit (EBIT) growth of 15% per annum.
- Operating margin (EBIT margin) of 25%.
- Return on invested capital (ROIC) of 25% per annum.
- Cash to earnings ratio of 60% as a 3 year average.

**OUTLOOK FOR THE YEAR 2002** The roll-out of products like NovoRapid®/NovoLog®, NovoMix®, InnoLet®, InDuo®, FlexPen® and Norditropin® SimpleXX® underpins Novo Nordisk's expectations of a positive sales development in 2002.

Assuming that currency exchange rates remain at the current level for the rest of the year we expect to meet the long-term financial target of growth in operating profit of 15% in 2002. This expectation includes income of approximately DKK 240 million related to the accounting effect for Novo Nordisk of the initial public offering of ZymoGenetics. The expectation for operating profit growth excludes potential income related to the planned out-licensing of NN622 currently in Phase 3 clinical development.

The operating profit expectation for 2002, adjusted for one-off items in 2001 like the patent settlement with Aventis and the payment from Novartis on NN622 and in 2002 for income related to the initial public offering of ZymoGenetics, corresponds to an expected growth of operating profit in the underlying business of more than 15%.

The largest part of the increase in operating profit for 2002 is expected to be realised in the second half of the year, primarily due to new product launches and the continued introduction of existing products in new geographical markets.

The major part of Novo Nordisk's sales is in currencies other than DKK, whereas a significant part of costs is in DKK. Thus, exchange rate fluctuations may have a significant impact on operating profit. All other things being equal, a 5% movement in JPY, USD and GBP rates is estimated to have an annual impact on operating profit of DKK 140 million, DKK 110 million and DKK 50 million, respectively. Depreciation and amortisation for 2002 are expected to be realised at the level of DKK 1.3 billion compared to DKK 1.1 billion in 2001.

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performance, whereas sales in Europe grew significantly as NovoNorm® continues to penetrate the market.

In 2001 a number of significant late stage projects reached important milestones: NN622, a second generation insulin sensitiser with a dual action, entered Phase 3 development in November. We are currently conducting Phase 2 trials for NN2211, an analogue of the natural hormone GLP-1.

Furthermore, AERx®IDMS (also known as NN1998), a pulmonary insulin delivery system, which we are developing together with Aradigm Corporation, has obtained Proof of Concept and Phase 3 trials are expected to start in 2002.

#### HAEMOSTASIS MANAGEMENT

### Increased demand for NovoSeven®

Sales of NovoSeven® increased by 36% to DKK 3,096 million, reflecting continued strong growth in the US and positive sales development in Europe. Several factors contributed to the sales growth. As confidence in the use of NovoSeven® in connection with surgical procedures in haemophilia patients increases so does the demand for NovoSeven®. Furthermore, NovoSeven® is increasingly being used for the treatment of acquired haemophilia and sales are also believed to have been positively affected by increased investigational use of NovoSeven®. Finally, sales have to a smaller degree been influenced by a shortage in the market of recombinant

FVIII products for use in certain segments of the haemophilia patient group.

A number of NovoSeven® clinical studies have been initiated this year and Novo Nordisk expects to start reporting from these trials during 2002.

Since the launch of NovoSeven® in 1996, estimating the market potential for this product has proven to be very challenging as the market consists of a narrow group of patients with very fluctuating treatment patterns. Within this patient group, consisting primarily of patients with congenital haemophilia with inhibitor and patients with acquired haemophilia, the market potential for NovoSeven® is estimated to be approximately USD 450 million.

→ To offset the exposure from foreign currency exchange rate variations on operating profit Novo Nordisk hedges its exposure in major currencies using forward exchange contracts and options. At the end of 2001 Novo Nordisk had hedged the future cash flow related to both USD and GBP 9 months ahead and JPY 14 months ahead. At the current level of exchange rates this is expected to lead to a gain on foreign exchange hedging of around DKK 100 million in 2002. Combined with positive net interest income and assuming that the current interest rates and exchange rates remain unchanged for the rest of 2002, the company expects net financial income of approximately DKK 150 million for the year.

For 2002 Novo Nordisk expects the tax rate to be 35%, 1 percentage point lower than the tax rate in 2001.

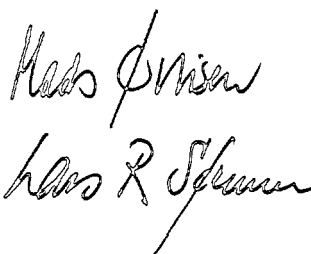
Novo Nordisk expects to invest DKK 4.5 billion in new facilities in 2002. As previously announced, the investment level will also in 2003 remain elevated, but is not expected to exceed the 2002 net investments. The investment in additional production capacity will enable Novo Nordisk to pursue significant opportunities within the core therapy areas: diabetes care and haemostasis management.

**EMPLOYEES** It is fashionable these days for companies to talk about valuing their 'intellectual capital' or 'human assets', but

for us, this simply means that we place tremendous value on the skills, commitment and enthusiasm that people working at Novo Nordisk bring to their jobs.

The number of employees in Novo Nordisk increased by 17% during 2001 to 16,141. This was primarily due to the ongoing expansions in our Product Supply organisation, with the purpose of increasing production output and establishing a workforce for our new factories. In addition we enlarged our international sales organisation, especially in the US where we have expanded our sales force to approximately 600 employees during the year.

We would like to thank everyone within Novo Nordisk and our shareholders for their commitment and support during 2001.



7 February 2002

Mads Øvlisen, chairman of the Board of Directors  
Lars Rebien Sørensen, president & CEO

#### GROWTH HORMONE THERAPY

### Continued roll-out of Norditropin® SimpleXx®

Sales of human growth hormone products rose by 3% to DKK 2,164 million. Sales in Europe have been driving the growth through the continued roll-out of Norditropin® SimpleXx®, our liquid recombinant growth hormone product. Sales in the US also contributed to the growth following the launch of Norditropin® SimpleXx® in the first quarter of 2001. Our market share in the industrialised world is 13.2%.

Sales in Japan were negatively impacted by inventory adjustments at wholesalers. In addition, the depreciation of the JPY compared to the first 9 months of 2000 has influenced reported sales negatively measured in DKK.

The registration file has been submitted in the EU for growth hormone treatment of infants who are born small for their gestational age due to growth retardation during pregnancy (SGA/IUGR), and who remain shorter than average around the age of two. New indications are being explored where the anabolic effect of human growth hormone is expected to change pathologic catabolic conditions and improve healing of tissue.

#### HORMONE REPLACEMENT THERAPY

### Approval of Novofem™

To strengthen the focus on hormone replacement therapy (HRT), we have moved management of the global business to our affiliate in the largest HRT market, Germany.

Activelle® a low-dose continuous combined HRT, has been launched in France, South Africa and Brazil. Activelle® has also entered a Phase 3b study with results showing a bleeding pattern during Activelle® treatment significantly better than sequential treatment, especially in late perimenopausal women.

Novofem™, the new low-dose sequential HRT, was approved in almost all EU countries plus Norway and Iceland in October 2001 and will be launched across Europe in 2002.

In the US, our partner Pharmacia Corporation, has launched Activelle® (Activella® in the US) and Vagifem®.

HRT sales in 2001 were DKK 1,435 million with growth of 10% compared to the previous year. Novo Nordisk's HRT market share in Europe is 13.4%.

#### LEGAL NOTICE

### Forward-looking statement

This *Annual Financial Report* contains forward-looking statements as the term is defined in the US Private Securities Litigation Reform Act of 1995. Forward-looking statements provide current expectations or forecasts of events such as new product introductions, product approvals and financial performance.

Such forward-looking statements are subject to risks, uncertainties and inaccurate assumptions. This may cause actual results to differ materially from expectations. Factors that may affect future results include interest rate and currency exchange rate fluctuations, delay or failure of development projects, production problems, unexpected contract breaches or terminations, government-mandated or market-driven price decreases for Novo Nordisk's products, introduction of competing products, Novo Nordisk's ability to successfully market both new and existing products, exposure to product liability and other lawsuits, changes in reimbursement rules and governmental laws and related interpretation thereof, unexpected growth in costs and expenses.

Risks and uncertainties are further described in reports filed by Novo Nordisk with the US Securities and Exchange Commission (SEC) including the company's Form 20-F, which was filed on 27 April 2001. Please also refer to the section 'Financial risk factors' in this *Annual Financial Report*, and to the company's Form 20-F, which will be filed no later than June 2002.

Novo Nordisk is under no duty to update any of the forward-looking statements after the date of this *Annual Financial Report* or to conform such statements to actual results, unless required by law.

Key figures	1997	1998	1999	2000	2001	Change	2000	2001
	DKK million	DKK million	DKK million	DKK million	DKK million	2000-2001	EUR million	EUR million
Diabetes care	8,889	9,818	11,777	14,578	<b>16,624</b>	14.0%	1,961	2,237
Haemostasis management (NovoSeven®)	369	576	1,313	2,270	<b>3,096</b>	36.4%	305	416
Growth hormone therapy	1,569	1,498	1,721	2,107	<b>2,164</b>	2.7%	283	291
Hormone replacement therapy	1,012	1,094	1,130	1,306	<b>1,435</b>	9.9%	176	193
Other	746	661	482	550	<b>457</b>	(16.9%)	74	61
Net turnover	12,585	13,647	16,423	20,811	<b>23,776</b>	14.2%	2,799	3,198
Operating profit (EBIT)	2,440	2,933	3,527	4,816	<b>5,614</b>	16.6%	648	755
Net financials	385	243	(178)	24	<b>416</b>	-	3	56
Profit before taxation	2,825	3,176	3,349	4,840	<b>6,030</b>	24.6%	651	811
Net profit	1,772	2,016	2,001	3,087	<b>3,865</b>	25.2%	415	520
Shareholders' funds	16,304	15,776	15,876	16,981	<b>20,137</b>	18.6%	2,284	2,708
Total assets	22,515	22,085	23,082	24,920	<b>28,905</b>	16.0%	3,351	3,887
Capital expenditure (net)	1,825	1,648	1,265	2,141	<b>3,846</b>	79.6%	288	517
Free cash flow	596	706	1,533	2,712	<b>186</b>	(93.1%)	365	25

Per share/ADR of DKK 2	1997	1998	1999	2000	2001	Change	2000	2001
	DKK	DKK	DKK	DKK	DKK	2000-2001	EUR	EUR
Earnings per share	4.76	5.43	5.60	8.84	<b>11.18</b>	26.4%	1.19	1.50
Earnings per share diluted	4.76	5.43	5.59	8.82	<b>11.10</b>	25.9%	1.19	1.49
Proposed dividend	1.15	1.55	1.95	2.65	<b>3.35</b>	26.4%	0.36	0.45
Quoted price at year-end for B shares	178	153	178	285	<b>342</b>	20.0%	38.33	45.99

Ratios	1997	1998	1999	2000	2001	Long-term financial targets
Growth in operating profit (EBIT)	N/A	20.2%	20.3%	36.5%	<b>16.6%</b>	15%
Operating profit margin	19.4%	21.5%	21.5%	23.1%	<b>23.6%</b>	25%
Return on invested capital (ROIC)	12.6%	14.4%	15.3%	22.0%	<b>23.1%</b>	25%
Cash to earnings	33.6%	35.0%	76.6%	87.9%	<b>4.8%</b>	
Cash to earnings, 3 year average	N/A	N/A	48.4%	66.5%	<b>56.4%</b>	60%
Net profit margin	14.1%	14.8%	12.2%	14.8%	<b>16.3%</b>	
Return on shareholders' funds	11.5%	12.6%	12.6%	18.8%	<b>20.8%</b>	
Equity ratio	72.4%	71.4%	68.8%	68.1%	<b>69.7%</b>	
Change in market capitalisation	79.9%	(16.5%)	13.7%	56.2%	<b>20.4%</b>	

The Group accounting policies have been changed in 2001 in accordance with the new Danish Company Accounts Act of 2001 and figures for 1997-2000 have been restated, see page 11 for further information on the changes.

Figures for 1997-1999 are derived from the consolidated accounts of the former Novo Nordisk Group (prior to the demerger) - all dividends are allocated to the continuing Novo Nordisk.

Key figures and per share data are translated into EUR as supplementary information - the translation is based on the currency rate at 31 December 2001 (EUR 1=DKK 7.4357).

Quoted prices for 1997-2000 are adjusted for the change in trading units for B shares from DKK 10 to DKK 2 and B shares/ADRs from 1:2 to 1:1.

Development in turnover	1997	1998	1999	2000	2001
Net turnover (in DKK million)	12,585	13,647	16,423	20,811	<b>23,776</b>
Prices and volume/mix	9%	11%	15%	16%	<b>17%</b>
Currency	4%	(3%)	5%	11%	<b>(3%)</b>
Total growth	13%	8%	20%	27%	<b>14%</b>

# Financial discussion

2001 proved to be yet another exciting year for Novo Nordisk with a solid growth in the basic business. Novo Nordisk exceeded the expectations set at the beginning of the year and thereby exceeded the long-term financial target for operating profit growth of 15%. On the currency exposure front, 2001 also proved to be a challenge with a 9% devaluation of JPY compared to DKK, which, however, to some extent has been counterbalanced by a 3% strengthening of USD compared to DKK. Adjusted for the impact from changes in currency exchange rates between 2000 and 2001, the growth in operating profit exceeded the long-term growth target convincingly.

The challenges in 2001 were many. The continued launch and roll-out of new products such as NovoRapid®/NovoLog®, NovoNorm®, Norditropin® SimpleXx® and InnoLet®, the establishment of an increased US sales force, several development projects in the late phases as well as the establishment of the new Protein Delivery Systems unit were the major cost drivers in 2001 and represent a significant investment in the future for Novo Nordisk. Additionally, Novo Nordisk has significantly increased investments in production capacity to be able to support the continued successful roll-out of products as well as to ensure sufficient capacity to support the launch of new products in the coming years. As a consequence of this, the largest investment programme in Novo Nordisk's history, the investment level in 2001 was elevated and is expected to be so in the near future.

Besides investing in activities within sales and marketing, in research and development and in production capacity, Novo Nordisk also decided to establish a foundation to fight diabetes in developing countries, the World Diabetes Foundation. Novo Nordisk will donate approximately DKK 500 million to the foundation over a 10-year period. The establishment of the founda-

tion is, however, subject to shareholder approval at the Annual General Meeting in March 2002.

The results in 2001 were achieved based on a solid growth in sales volumes and in an improved product mix, however, negatively affected by a devaluation of the JPY, which is one of Novo Nordisk's major invoicing currencies. Overall, the growth in operating profit of 17% to DKK 5,614 million from DKK 4,816 million was driven by the 14% sales increase and an improved operating margin of 23.6%, which was partly influenced by the patent settlement with Aventis in January and the upfront payment in connection with the now terminated collaboration with Novartis.

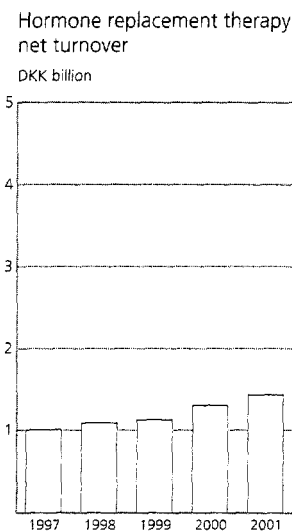
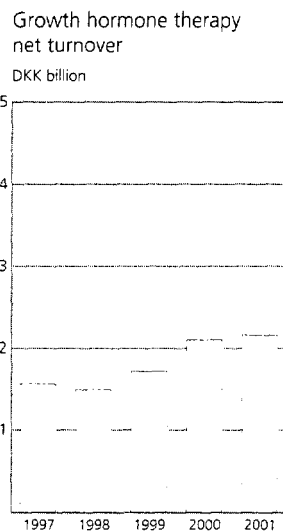
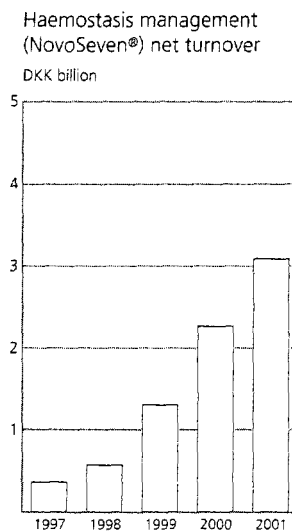
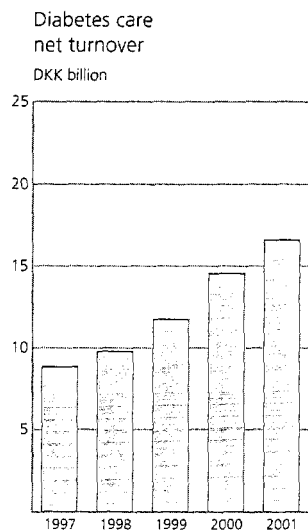
Profit before and after tax increased by 25% to DKK 6,030 million and by 25% to DKK 3,865 million, respectively. Fully diluted earnings per share increased by 26% to DKK 11.10 in 2001 from DKK 8.82 in 2000.

Operating margin increased to 23.6% from 23.1% in 2000 and the return on invested capital increased from 22.0% in 2000 to 23.1% in 2001.

The free cash flow ended at DKK 186 million compared to DKK 2,712 million in 2000, mainly as a result of the reinvestment of the cash generated from operations in an expansion of production facilities. The 3 year moving average cash to earnings ratio thus decreased to 56.4% in 2001 down from 66.5% in 2000.

**SALES DEVELOPMENT** Sales increased by 14% to DKK 23,776 million from DKK 20,811 million in 2000. Growth was primarily due to increased sales volumes and improved product mix, with diabetes care and haemostasis management (formerly labelled 'coagulation disorders') as the main drivers.

Solid growth was realised worldwide with Europe as the



largest contributor of growth in absolute terms followed by the US. Sales for Japan measured in DKK decreased by 7% primarily negatively affected by wholesalers' inventory adjustments and the depreciation of JPY versus DKK. Measured in local currency, sales in Japan increased by 2%.

In local currencies, worldwide sales increased by 17%. The average value of Novo Nordisk's invoicing currencies, measured in DKK, was 3% lower in 2001 than in 2000, primarily due to the depreciation of JPY versus DKK during 2001 of 9%.

**DIABETES CARE** Sales of diabetes care products grew by 14% to DKK 16,624 million from DKK 14,578 million in 2000. The increase reflects volume growth and positive contribution from products like Penfill® 3ml, NovoLet® 3ml, NovoRapid®/NovoLog® (rapid-acting insulin analogue), InnoLet® and NovoNorm®/Prandin®.

**Insulin and delivery systems** Excluding sales of NovoNorm®/Prandin®, diabetes care increased by 13%. High growth was primarily realised in Europe, the US and a number of developing countries.

In Europe high market growth especially in Germany and the UK contributed to growth combined with increased sales of NovoRapid®, Penfill® 3ml and NovoLet® 3ml.

Sales of diabetes care products, excluding Prandin®, in the US increased by 26% measured in DKK and 22% in local currency. US sales account for 14% of worldwide sales of diabetes care products excluding sales of NovoNorm®/Prandin®. This development has primarily been driven by growth in insulin volumes via large tender orders and sales of Novo Nordisk insulin under Wal-Mart's ReliOn® brand. Over the year, Novo Nordisk has established a US sales force of approximately 600 fully educated and trained Novo Nordisk employees. NovoLog® (the US name for NovoRapid®), our rapid-acting insulin analogue, was launched in the US at the end of September 2001. Although initial sales have been influenced by wholesaler inventory build-up, the preliminary feedback indicates a positive market response.

The key drivers of sales in the future will be continued global

insulin volume growth supported by growth derived from Novo Nordisk's range of insulin analogue preparations and innovative delivery devices.

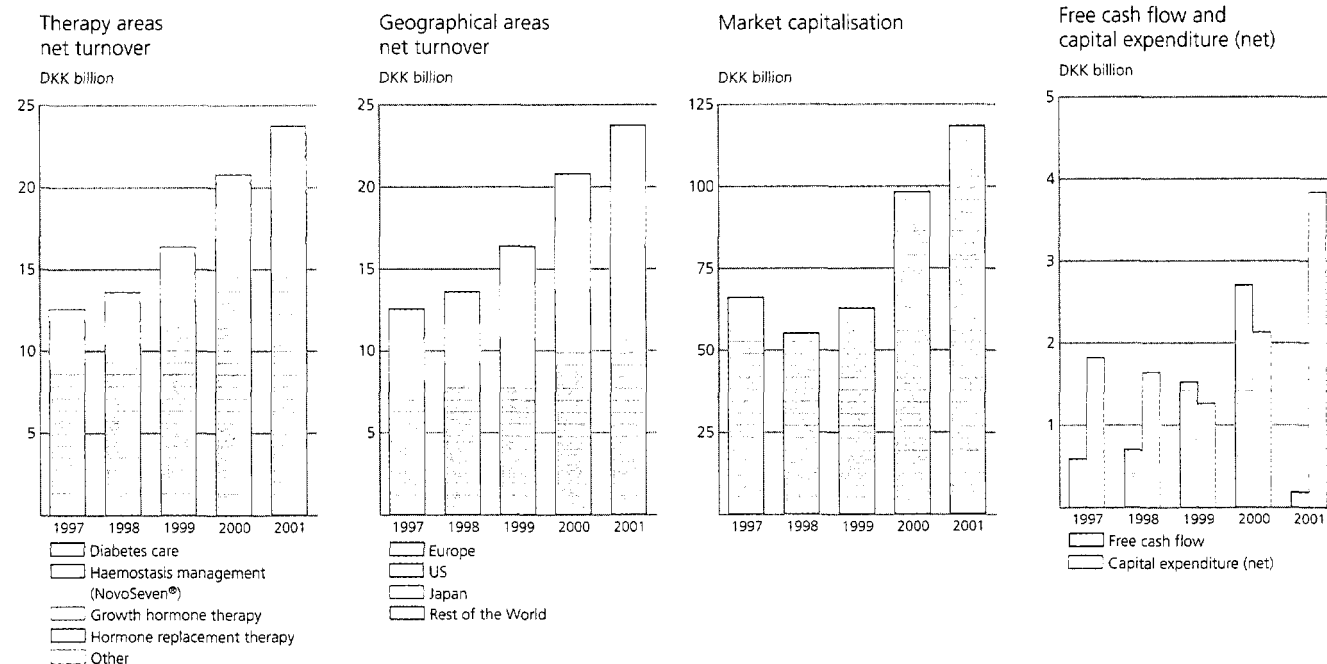
Novo Nordisk has now launched the rapid-acting analogue NovoRapid®/NovoLog® in most markets and plans during 2002 to launch NovoMix® 30, a new dual-release insulin analogue. This new insulin analogue will be available in FlexPen®, a prefilled and disposable pen which provides patients with the confidence to more easily manage their insulin injections.

InnoLet® has been launched in several European countries, in Australia and in Japan. First market feedback holds good promise for this first disposable insulin device developed for people with poor eyesight and reduced manual dexterity. In addition Novo Nordisk also introduced two new devices in 2001; InDuo®, the world's first combined insulin injection device and blood glucose monitor, which is produced and marketed together with LifeScan; and FlexPen®, the new prefilled insulin injection device. Novo Nordisk expects to roll out these products in Europe and the US during 2002.

**NovoNorm®/Prandin®** Sales of NovoNorm®/Prandin® increased to DKK 1,401 million, an increase of 29% over 2000. Sales increases were realised both in the US and in Europe in 2001, but growth was primarily driven by continued penetration in the European markets.

**Protein Delivery Systems** In October 2001, Novo Nordisk announced the establishment of a new diabetes care research and development unit, Protein Delivery Systems. The unit will combine Novo Nordisk's skills in protein formulation and delivery with glucose measurement systems and thereby develop novel ways of delivering proteins, primarily insulin.

**HAEMOSTASIS MANAGEMENT** Sales within haemostasis management (NovoSeven®) increased by 36% to DKK 3,096 million from DKK 2,270 million. Sales growth of NovoSeven® was primarily realised in the US, where the product has been very well received. Europe and countries in the rest of the world →



→ have, however, also contributed to growth.

There were several key growth drivers for NovoSeven® during 2001. One was increased confidence in using NovoSeven® in connection with surgical procedures in haemophilia patients. Another was an increased use of NovoSeven® in the treatment of acquired haemophilia. Finally, sales are also perceived to have been positively affected by increased investigational use of NovoSeven®. The above factors are expected to continue to drive sales growth of NovoSeven® in the near term.

Since the launch of NovoSeven® in 1996 it has proven to be very challenging to estimate the market potential for NovoSeven® as the current market consists of a narrow group of patients with very fluctuating treatment patterns. In addition, it has also proven to be very difficult to divide the usage of NovoSeven® between various patient groups within the area of haemophilia and congenital diseases due to the absence of valid market data. Based on this Novo Nordisk has decided to provide a market estimate for these patient groups in total. This patient group for NovoSeven® consists primarily of patients with congenital haemophilia with inhibitor and patients with acquired haemophilia, but also, to a smaller extent, of patients with FVII and FXI deficiency and other coagulation factor defects such as Glanzmann's Thrombasthenia and Bernard-Soulier syndrome. Within this patient group the market potential for NovoSeven® is estimated to be approximately USD 450 million. Outside this patient group, sales of NovoSeven® for investigational purposes are currently estimated to be limited.

**Haemostasis research and development** Several new indications for the use of NovoSeven® in connection with surgery and intensive care are being investigated. Since November 2001, a study for the use of NovoSeven® as a reversal of anticoagulant therapy has been initiated. Novo Nordisk now has seven projects in Phase 2 development and expects a study of the use of NovoSeven® as a haemostatic agent for bleedings related to traumatic injuries to be initiated in the first half of 2002. As previously announced Novo Nordisk expects to be able to communicate the conclusions from certain of these studies during 2002.

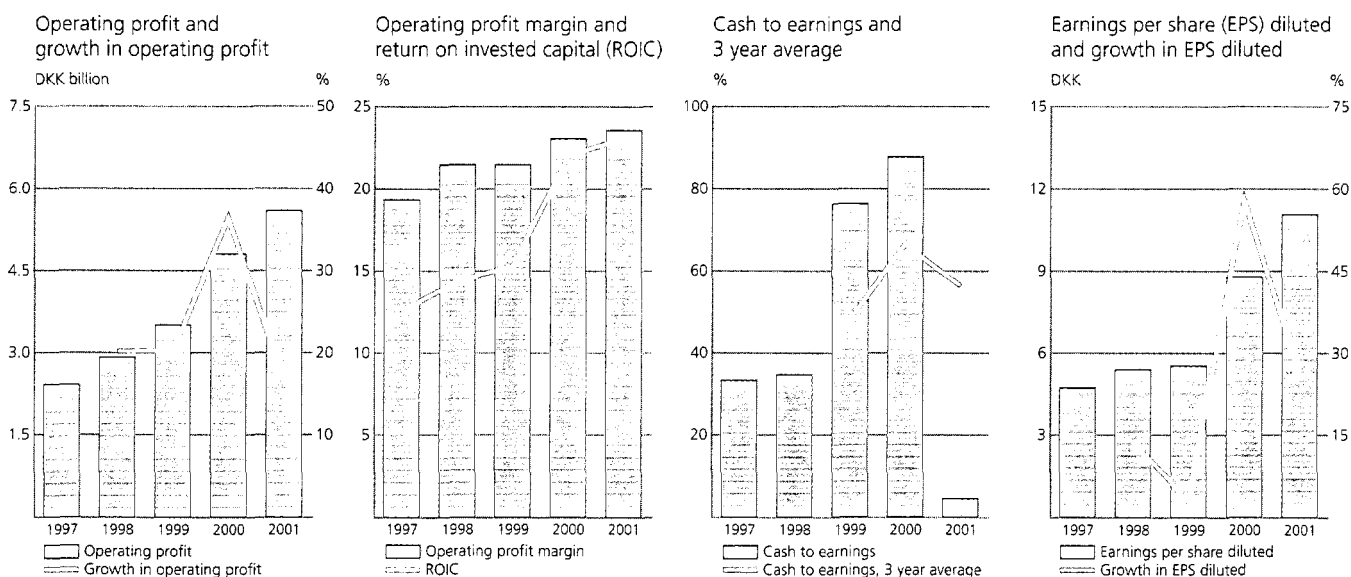
**GROWTH HORMONE THERAPY** Sales of growth hormone therapy products rose by 3% to DKK 2,164 million from DKK 2,107 million reflecting positive market development in Europe and the US and negative development in Japan. The continued successful market penetration of Norditropin® SimpleXx® (liquid Norditropin®) in a number of European countries has been the primary driver of growth. Sales in the US have also contributed to the growth following a successful launch of Norditropin® SimpleXx® in October 2000. In Japan sales measured in DKK decreased by 13%, whereas in local currency the sales only decreased by 4%. The primary reason for this was wholesalers' inventory build-up in the fourth quarter of 2000.

A registration file has been submitted in the EU for growth hormone treatment of infants who are born small due to growth retardation during pregnancy and who remain shorter than average around the age of two (small for gestational age/intra-uterine growth retardation).

**HORMONE REPLACEMENT THERAPY** Sales of hormone replacement therapy products increased by 10% to DKK 1,435 million from DKK 1,306 million. Growth was realised predominantly in Europe, primarily via the low-dose continuous combined product Activelle® and the topical product Vagifem®. The new low-dose sequential product, Novofem™, was approved in almost all European countries and is expected to be launched in Europe during 2002.

Sales to the US market also contributed to the growth following the launch of Activella® and Vagifem® by Pharmacia in the US during the second and third quarters of 2000.

**COST DEVELOPMENT** Total costs, excluding financial costs and tax, grew by 15% to DKK 19,029 million. Production costs amounted to DKK 5,979 million, corresponding to an increase of 19%. This increase includes the costs of building up skills needed for the ongoing capacity expansion. Sales and distribution costs increased in line with sales or by 15% to DKK 7,215 million. This increase mirrors the expansion of the international marketing and sales competencies and also reflects the intro-



duction of several new products such as InDuo® and FlexPen® as well as the continued launch and roll-out of innovative products such as NovoRapid®, NovoNorm®, Norditropin® SimpleXx® and InnoLet®. Research and development costs grew by 17% to DKK 3,970 million. This cost increase is primarily related to the development projects NN304 (detemir), NN622 and NN1998 (AERx®iDMS), and the cost related to the clinical trials for new indications for NovoSeven®. Administrative expenses for 2001 amounted to DKK 1,865 million, on level with expenses in 2000 in absolute terms. Included in the total costs are depreciation and amortisation of DKK 1,081 million.

**LICENCE FEES AND OTHER OPERATING INCOME** In total, licence fees and other operating income amounted to DKK 867 million in 2001 compared to DKK 571 million in 2000. This increase mainly relates to income from the settlement of a patent dispute with Aventis in January 2001 and, in addition, an upfront payment in connection with the now terminated collaboration with Novartis.

**NET FINANCIALS AND TAX** Net financials showed a net income of DKK 416 million in 2001 compared to DKK 24 million in 2000. Net interest income increased to DKK 192 million in 2001 from DKK 184 million in 2000. In 2001 Novo Nordisk has recorded a foreign exchange gain of DKK 202 million compared to a loss of DKK 195 million in 2000. The net foreign exchange gain is primarily due to realised and unrealised gains on hedging of Novo Nordisk's exposure with respect to JPY.

The effective tax rate for 2001 was 36%, leading to total taxes expensed in 2001 of DKK 2,165 million.

**CAPITAL EXPENDITURE** The total net capital expenditure for property, plant and equipment in 2001 was DKK 3.8 billion, compared with DKK 2.1 billion in 2000. The increased investment level is related to the positive underlying trend in our core businesses and the current expectations for projects in late stage development. Several large projects are ongoing: The new insulin factory in Kalundborg, Denmark, which is expected to

deliver human as well as analogue insulin to the market by 2004; the new NovoSeven® factory in Hillerød, Denmark, which is also expected to be ready by 2004, and a new device factory also in Hillerød, Denmark. The total capital expenditure recorded for 2001 was influenced by higher than anticipated prepayments to suppliers.

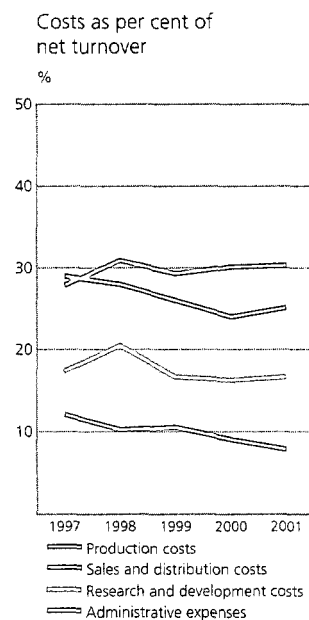
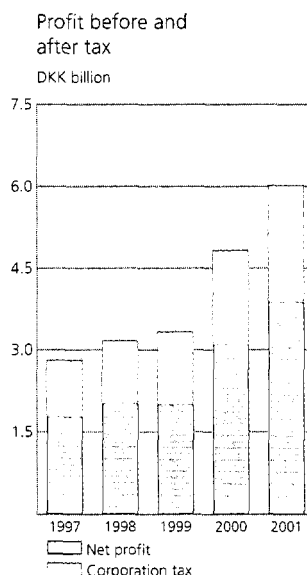
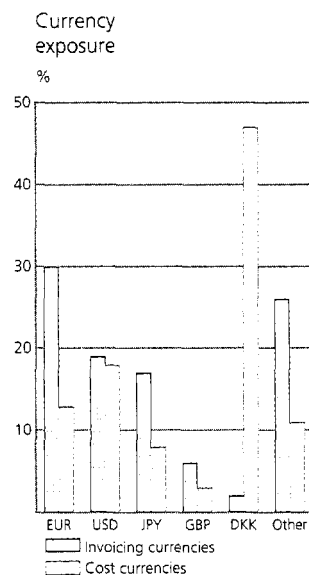
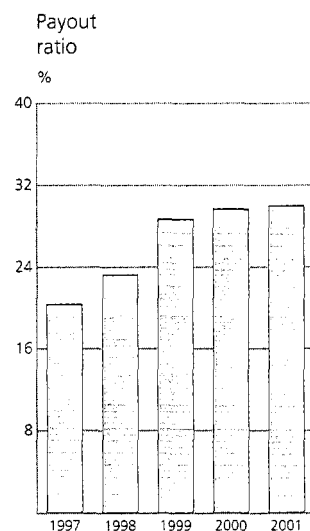
**FREE CASH FLOW AND FINANCIAL RESERVES** The free cash flow for 2001 was realised at DKK 186 million down from DKK 2,712 million in 2000. The primary reason for this decline is that the cash generated from operations has been reinvested in an expansion of production facilities.

Novo Nordisk's financial reserves at the end of 2001 were DKK 2,287 million compared to DKK 3,073 million in 2000. In addition to the financial reserves, Novo Nordisk has undrawn committed credit facilities of DKK 5,046 million.

**SHAREHOLDERS' FUNDS** Total shareholders' funds increased to DKK 20,137 million by the end of 2001, equalling 69.7% of total assets, compared with 68.1% in 2000.

Shareholders' funds in 2001 increased by net profit of DKK 3,865 million and a net proceed from sale of own shares (related to employee shares and incentive schemes) of DKK 202 million, but were reduced by repurchase of own shares of DKK 24 million and dividend paid of DKK 916 million. Other adjustments contributed DKK 29 million to shareholders' funds. In total, shareholders' funds increased by DKK 3,156 million.

**ZYMOGENETICS** Novo Nordisk is the largest shareholder of the Seattle-based biotech company ZymoGenetics, which at the beginning of February 2002 completed an initial public offering of its common stock, now listed on the US Nasdaq stock exchange under the ticker symbol 'ZGEN'. As described in the press release on 1 February 2002, the issuance of new shares in ZymoGenetics is expected to provide Novo Nordisk with income of approximately DKK 240 million related to the accounting effect for Novo Nordisk of the initial public offering of ZymoGenetics. After the completion of the offering, Novo Nordisk holds 39% →



→ of the company on a fully diluted basis. Novo Nordisk's part of the net loss at ZymoGenetics is booked as research and development costs at Novo Nordisk.

**FINANCIAL RISK FACTORS AND FINANCIAL RISK MANAGEMENT** Novo Nordisk has centralised management of the Group's financial risks. The overall objectives and policies for Novo Nordisk's financial risk management are outlined in the Novo Nordisk Treasury Policy, which is approved by the Board of Directors. The Treasury Policy consists of the Foreign Exchange Policy, the Investment Policy, the Financing Policy and the Policy regarding Credit Risk on Financial Counterparts together with a description of allowed instruments and risk limits.

Novo Nordisk hedges commercial exposure only and consequently does not enter into speculative positions.

Novo Nordisk uses a Treasury Management System to manage all financial positions including accounts payable, accounts receivable and future expected cash flows. All financial positions are marked-to-market based upon real-time quotes and market rates, while the risks arising from the financial positions are assessed within the system using generally accepted standards.

**Foreign exchange risk management** The major part of Novo Nordisk's sales is in currencies other than DKK, whereas a significant part of costs is in DKK. Thus, exchange rate fluctuations may have a significant impact on the profit and loss account (transaction risk). Further, exchange rate fluctuations may have an impact on the balance sheet through translation risk arising from the invested equity in foreign subsidiaries.

Novo Nordisk's foreign exchange risk is in decreasing order most significant in JPY, USD and GBP. Notwithstanding the considerable net income in EUR, the foreign exchange risk herein is regarded as low, due to the Danish fixed rate policy vis-à-vis EUR.

The overall objective of the foreign exchange risk management is to limit the negative impact on earnings and cash flows from exchange rate fluctuations, thereby increasing the predictability of the financial result.

Novo Nordisk hedges existing assets and liabilities in major currencies, as well as future expected cash flows up to several months forward. The hedging of transaction risk is based upon expectations of future exchange rates. Transaction risk is hedged mainly through using foreign exchange forwards and foreign exchange options matching the due date of the hedged item. Expected future cash flows are continuously assessed using historical inflows, budgets and monthly sales forecasts. Hedge effectiveness is assessed on a regular basis.

At year-end, the transaction exposure in major currencies and the corresponding hedging were as shown in the table below.

Transaction exposure in major currencies and the corresponding hedging

Currency	Effect on EBIT of 5% change* DKK million	Months cover of expected future net cash flow
USD	110	9
JPY	140	14
GBP	50	9

\* Before hedging activities

Novo Nordisk hedges the invested equity in foreign affiliates on a discretionary basis. Equity hedging is done using long-term cross-currency swaps. At year-end, 59% of the Group's JPY equity, 52% of the Group's EUR equity and 27% of the Group's USD equity was hedged.

**Interest rate risk management** Changing interest rates affect Novo Nordisk's profit and loss account as well as the balance sheet. Novo Nordisk is mainly exposed to interest rate risk through interest bearing assets and liabilities, as shown in the table below.

The overall objective of the interest rate risk management is to limit the negative impact on earnings and on the balance sheet from interest rate fluctuations.

With the aim of achieving a competitive return subject to defined risk limits, excess liquidity is primarily invested in high-rated, liquid instruments denominated in DKK or EUR. Follow-up on the investment of excess liquidity is based upon predefined benchmarks. The interest rate risk is assessed through standard interest rate risk measures.

Novo Nordisk ensures availability of required liquidity through a combination of cash management, highly liquid investment portfolios and uncommitted and committed facilities. Further, Novo Nordisk's operational performance and high equity ratio ensures access to attractive short- and long-term funding.

**Counter-party risk management** The use of money market deposits and financial instruments gives rise to counter-party exposure. To manage and limit this exposure, Novo Nordisk only enters into financial instruments with financial counterparts having a satisfactory long-term credit rating. Money market deposits are only entered into with financial counterparts having a satisfactory short-term credit rating.

The counter-party exposure is calculated based upon the net market values of off-balance sheet instruments, and the notional amounts of short-term on-balance sheet instruments.

**Equity price risk management** Novo Nordisk has to a limited extent strategic minority investments in both listed and non-listed companies and is consequently exposed to equity risk. Compared to the foreign exchange and interest rate risk, the equity price risk is of minor importance. At year-end, a 10% adverse price effect would result in a loss of DKK 7 million.

Interest rate portfolios

	Notional amount DKK million	Market value DKK million	Duration years
Money market	919	919	0.06
Bond	1,345	1,367	1.52
Total interest bearing assets	2,264	2,286	0.93
Short-term debt	817	817	0.01
Long-term debt	863	865	2.45
Total interest bearing liabilities	1,680	1,682	1.26

The Consolidated financial statements have been prepared in accordance with the new Danish Company Accounts Act of 7 June 2001 and the accounting regulations for companies listed on the Copenhagen Stock Exchange. The Consolidated financial statements have been prepared in accordance with the accounting policies described in Note 1 to the Consolidated financial statements.

As of 1 January 2001, the accounting policies have been changed to comply with the new Danish Company Accounts Act of 7 June 2001 and the following areas have been changed:

- ◉ Dividends are recorded in the accounts when they are declared at the Annual General Meeting. Proposed dividends are no longer recognised as a liability, but are disclosed in connection with the Consolidated statement of changes in shareholders' funds.
- ◉ All financial instruments are measured at market value at the balance sheet date. Unrealised foreign exchange rate adjustments of financial instruments hedging future transactions are deferred via shareholders' funds.
- ◉ Other securities and participating interests are stated at market value at the balance sheet date. Realised and unrealised gains and losses (net) are included in financial income/financial expenses.
- ◉ The revaluation reserve concerning current asset investments has been dissolved.

The changes in accounting policies only have a minor effect on the Consolidated financial statements, and all comparative figures have been adjusted to comply with the new accounting policies. For 2001 the changes have the following effect:

- ◉ Profit before tax and net profit have not been affected.
- ◉ Total assets at 31 December 2001 have increased by DKK 188 million.
- ◉ Shareholders' funds at 31 December 2001 have been increased by DKK 1,349 million.

In November 2000 Novo Nordisk A/S demerged Novozymes A/S (the former enzymes business) with effect from 1 January 2000. As mentioned in the Annual Report for 2000 the comparative figures for 1999 of Novo Nordisk are derived from the financial statements of the former Novo Nordisk and are presented as if Novo Nordisk had existed without the enzymes business.

#### Effect of changes in accounting policies for the Group

DKK million	2001	2000	1999
Debtors before changes in accounting policies	<b>5,854</b>	4,711	5,481
Financial instruments	<b>188</b>	327	–
Debtors after changes in accounting policies	<b>6,042</b>	5,038	5,481
Short-term liabilities before changes in accounting policies	<b>7,167</b>	6,412	5,632
Proposed dividends	<b>(1,161)</b>	(916)	(691)
Short-term liabilities after changes in accounting policies	<b>6,006</b>	5,496	4,941
Shareholders' funds before changes in accounting policies	<b>18,788</b>	15,738	15,185
Financial instruments	<b>188</b>	327	–
Proposed dividends	<b>1,161</b>	916	691
Shareholders' funds after changes in accounting policies	<b>20,137</b>	16,981	15,876

DKK million	Note	2001	2000	1999
Net turnover	2	<b>23,776</b>	20,811	16,423
Production costs	3, 4	<b>5,979</b>	5,044	4,227
Gross profit		<b>17,797</b>	15,767	12,196
Sales and distribution costs	3, 4	<b>7,215</b>	6,254	4,812
Research and development costs	3, 4	<b>3,970</b>	3,390	2,748
Administrative expenses	3, 4, 5	<b>1,865</b>	1,878	1,721
Restructuring expenses		-	-	350
Licence fees and other operating income (net)	6	<b>867</b>	571	962
Operating profit		<b>5,614</b>	4,816	3,527
Share of profit in associated companies	4	<b>49</b>	3	2
Financial income	7	<b>499</b>	382	218
Financial expenses	8	<b>132</b>	361	398
Profit before taxation		<b>6,030</b>	4,840	3,349
Corporation tax	9	<b>2,165</b>	1,753	1,348
<b>Net profit</b>		<b>3,865</b>	3,087	2,001
Earnings per share (DKK)	10	<b>11.18</b>	8.84	5.60
Earnings per share diluted (DKK)	10	<b>11.10</b>	8.82	5.59

DKK million	Note	31 Dec 2001	31 Dec 2000
<b>ASSETS</b>			
<b>Intangible fixed assets</b>	11	<b>14</b>	<b>32</b>
Land and buildings		<b>5,353</b>	5,354
Plant and machinery		<b>3,072</b>	2,690
Other equipment		<b>1,073</b>	995
Fixed assets in course of construction and payments on account		<b>4,128</b>	1,860
<b>Tangible fixed assets</b>	12	<b>13,626</b>	<b>10,899</b>
Amounts owed by affiliated companies		<b>–</b>	25
Participating interests in associated companies		<b>1,307</b>	1,019
Other securities and participating interests		<b>94</b>	90
<b>Fixed asset investments</b>	13	<b>1,401</b>	<b>1,134</b>
<b>Total fixed assets</b>		<b>15,041</b>	<b>12,065</b>
<b>Stocks</b>	14	<b>4,760</b>	<b>3,972</b>
Trade debtors	15	<b>3,882</b>	3,396
Amounts owed by affiliated companies		<b>76</b>	175
Tax receivable		<b>399</b>	234
Other debtors	16	<b>1,685</b>	1,233
<b>Debtors</b>		<b>6,042</b>	<b>5,038</b>
<b>Current asset investments</b>	17	<b>1,402</b>	<b>2,567</b>
<b>Cash at bank and in hand</b>		<b>1,660</b>	<b>1,278</b>
<b>Total current assets</b>		<b>13,864</b>	<b>12,855</b>
<b>Total assets</b>		<b>28,905</b>	<b>24,920</b>
<b>SHAREHOLDERS' FUNDS AND LIABILITIES</b>			
Share capital	18	<b>709</b>	754
Share premium account		<b>2,565</b>	2,565
Retained earnings		<b>16,461</b>	13,289
Other comprehensive income		<b>402</b>	373
<b>Total shareholders' funds</b>		<b>20,137</b>	<b>16,981</b>
Provision for deferred tax (net)	19	<b>1,358</b>	970
Other provisions	20	<b>541</b>	523
<b>Provisions</b>		<b>1,899</b>	<b>1,493</b>
<b>Banks and other credit institutions</b>	21	<b>863</b>	<b>950</b>
<b>Long-term debt</b>		<b>863</b>	<b>950</b>
Bank loans	22	<b>817</b>	821
Trade creditors		<b>970</b>	977
Amounts owed to affiliated companies		<b>16</b>	39
Tax payable		<b>62</b>	138
Other short-term liabilities	23	<b>4,141</b>	3,521
<b>Short-term liabilities</b>		<b>6,006</b>	<b>5,496</b>
<b>Total long-term debt and short-term liabilities</b>		<b>6,869</b>	<b>6,446</b>
<b>Total shareholders' funds and liabilities</b>		<b>28,905</b>	<b>24,920</b>

DKK million	Note	2001	2000	1999
<b>Net profit</b>		<b>3,865</b>	3,087	2,001
<b>Reversals with no effect on cash flow:</b>				
Corporation tax		<b>2,165</b>	1,753	1,348
Depreciation and amortisation		<b>1,081</b>	1,038	943
Interest receivable and interest payable		<b>(192)</b>	(184)	(117)
Other reversals with no effect on cash flow	24	<b>477</b>	240	64
Corporation tax paid		<b>(1,900)</b>	(1,739)	(1,283)
Interest received and interest paid (net)		<b>280</b>	154	89
<b>Cash flow before change in working capital</b>		<b>5,776</b>	4,349	3,045
<b>Change in working capital:</b>				
(Increase)/decrease in trade debtors and other debtors		<b>(1,247)</b>	664	(616)
(Increase)/decrease in amounts owed by/to affiliated companies		<b>76</b>	(131)	32
(Increase)/decrease in stocks		<b>(847)</b>	(377)	(321)
Increase/(decrease) in trade creditors and other creditors		<b>562</b>	753	687
<b>Cash flow from operating activities</b>		<b>4,320</b>	5,258	2,827
<b>Investments:</b>				
Sale of fixed asset investments		<b>17</b>	85	–
Purchase of intangible fixed assets and fixed asset investments		<b>(305)</b>	(63)	(29)
Effect of ZymoGenetics Inc's deconsolidation in 2000	25	<b>–</b>	(427)	–
Sale of tangible fixed assets		<b>97</b>	225	96
Purchase of tangible fixed assets		<b>(3,943)</b>	(2,366)	(1,361)
<b>Cash flow from investing activities</b>		<b>(4,134)</b>	(2,546)	(1,294)
<b>Free cash flow</b>		<b>186</b>	2,712	1,533
<b>Financing:</b>				
New long-term loans		<b>–</b>	–	93
Repayment of long-term loans		<b>(64)</b>	(36)	(247)
Loan repaid from Novozymes		<b>25</b>	40	2,398
Purchase of own shares		<b>(24)</b>	(2,472)	(1,448)
Sale of own shares		<b>34</b>	189	10
Value adjustment of Novozymes shares		<b>–</b>	818	–
Dividends paid		<b>(916)</b>	(691)	(562)
<b>Cash flow from financing activities</b>		<b>(945)</b>	(2,152)	244
<b>Net cash flow</b>		<b>(759)</b>	560	1,777
Unrealised gain/(loss) on exchange rates and current asset investments included in cash and cash equivalents		<b>(27)</b>	18	14
<b>Net change in cash and cash equivalents</b>		<b>(786)</b>	578	1,791
Cash and cash equivalents at the beginning of the year		<b>3,073</b>	2,495	704
<b>Cash and cash equivalents at the end of the year</b>	26	<b>2,287</b>	3,073	2,495
Undrawn committed credit facilities	22	<b>5,046</b>	4,812	4,439
<b>Financial resources at the end of the year</b>		<b>7,333</b>	7,885	6,934

# Consolidated statement of changes in shareholders' funds

DKK million	Share capital	Share premium account	Retained earnings	Other comprehensive income	Total
<b>1999</b>					
Balance at the beginning of the year	754	2,565	11,850	118	15,287
Effect of change in accounting policies			562	(73)	489
Restated balance at the beginning of the year	754	2,565	12,412	45	15,776
Net profit for the year			2,001		2,001
Purchase of own shares			(1,448)		(1,448)
Dividends declared			(562)		(562)
Exchange rate adjustment of participating interests in subsidiaries				7	7
Reversal of deferred (gain)/loss on future cash flow hedges at the beginning of the year				73	73
Other adjustments				29	29
Balance at the end of the year	754	2,565	12,403	154	15,876

At the beginning of the year a revaluation reserve of DKK 17 million has been dissolved and transferred to retained earnings.

At the end of the year proposed dividends of DKK 691 million is included in retained earnings.

DKK million	Share capital	Share premium account	Retained earnings	Other comprehensive income	Total
<b>2000</b>					
Balance at the beginning of the year	754	2,565	12,403	154	15,876
Net profit for the year			3,087		3,087
Purchase of own shares			(2,472)		(2,472)
Sale of own shares to Novozymes			189		189
Value adjustment of Novozymes shares (net)			773		773
Dividends declared			(691)		(691)
Exchange rate adjustment of participating interests in subsidiaries				(108)	(108)
Deferred gain/(loss) on future cash flow hedges at the end of the year				327	327
Balance at the end of the year	754	2,565	13,289	373	16,981

At the end of the year proposed dividends of DKK 916 million is included in retained earnings.

DKK million	Share capital	Share premium account	Retained earnings	Other comprehensive income	Total
<b>2001</b>					
Balance at the beginning of the year	754	2,565	13,289	373	16,981
Net profit for the year			3,865		3,865
Write-down of B share capital during the year	(45)		45		-
Purchase of own shares			(24)		(24)
Sale of own shares			34		34
Employee shares sold			168		168
Dividends declared			(916)		(916)
Exchange rate adjustment of participating interests in subsidiaries				112	112
Reversal of deferred (gain)/loss on future cash flow hedges at the beginning of the year				(327)	(327)
Deferred gain/(loss) on future cash flow hedges at the end of the year				188	188
Other adjustments				56	56
Balance at the end of the year	709	2,565	16,461	402	20,137

At the end of the year proposed dividends of DKK 1,161 million is included in retained earnings.

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# 1 Accounting policies

The Consolidated financial statements have been prepared in accordance with the new Danish Company Accounts Act of 7 June 2001 and the accounting regulations for companies listed on the Copenhagen Stock Exchange.

At 1 January 2001, the accounting policies have been changed to comply with the new Danish Company Accounts Act of 7 June 2001 – please see the section 'Consolidated financial statements for 2001'.

**BASIS OF CONSOLIDATION** The Consolidated financial statements include the financial statements of Novo Nordisk A/S and all the companies in which the Group owns more than 50% of the voting rights or in some other way has a controlling influence (subsidiaries).

Companies which are not subsidiaries, but in which the Group holds 20% or more of the voting rights or in some other way has a significant influence on the operational and financial management, are treated as associated companies.

The Consolidated financial statements are based on the financial statements of the parent company and of the subsidiaries and are prepared by combining items of a uniform nature and eliminating intercompany transactions, shareholdings, balances and unrealised intercompany profits. The Consolidated financial statements are based on financial statements prepared by applying Group accounting policies.

On acquisition of new companies, the purchase method is applied. Thus, the new company's assets and liabilities are restated at fair values at the time of acquisition. Cost of shares in excess of net assets after revaluation is capitalised as goodwill and amortised over the expected economic life.

Newly acquired and divested companies are included in the profit and loss account for the period of ownership. Comparative figures are not adjusted for disposed or newly acquired businesses.

**TRANSLATION OF FOREIGN CURRENCIES** Assets and liabilities in foreign currencies are translated into Danish kroner at the exchange rates ruling at the balance sheet date.

Financial statements of foreign subsidiaries are translated into Danish kroner at exchange rates ruling at the balance sheet date for assets and liabilities and average exchange rates for profit and loss items.

All exchange rate adjustments are recognised in the profit and loss account with the exception of exchange gains and losses arising from:

- The translation of foreign subsidiaries' net assets at 1 January at closing rates at 31 December of the same year.
- The translation of foreign subsidiaries' profit and loss accounts at average exchange rates and balance sheets at exchange rates ruling at the balance sheet date.
- The translation of long-term intercompany loans which are considered to be an addition to the net assets in the subsidiaries.
- The translation of currency swaps contracted to hedge investments in subsidiaries.
- The translation of participating interests in associated companies.

The above exchange gains and losses are taken directly to other comprehensive income under shareholders' funds.

The financial statements of subsidiaries in countries with high inflation are adjusted in order to eliminate the effect of the high inflation.

**INCOME RECOGNITION** Sales are recorded as income at the time of risk transfer related to the goods sold.

Sale of rights etc is as a principal rule recorded as income at the time of the sale. Where the Novo Nordisk Group assumes an obligation in connection with a sale of rights, etc the income is recognised in accordance with the term of the obligation. On the sale of rights, etc where the final acquisition of the right is conditional on future events, the amount is recorded as income at the occurrence of such future events.

**NET TURNOVER** Net turnover represents amounts invoiced excluding value added tax and after deduction of goods returned, trade discounts and allowances.

**RESEARCH AND DEVELOPMENT COSTS** All research and development costs are taken to the profit and loss account as incurred. Significant uncertainties regarding regulatory approval, a long development phase and other inherent risks prevent capitalisation of development costs on new products.

Research and development costs include the Group's share of profit or loss in research and development companies, which are not consolidated if the activities in these companies are considered to be within Novo Nordisk's focus areas. Minor investments in such research and development companies in which the Novo Nordisk Group does not obtain significant or controlling influence are taken to the profit and loss account as research and development costs on acquisition.

**LICENCE FEES AND OTHER OPERATING INCOME (NET)** Licence fees and other operating income (net) comprise licence fees and income (net) of a secondary nature in relation to the main activities of the Group. The item also includes one-off income items (net) in respect of sale of rights etc, and capital gain from dilution or sale of interests in research and development companies with activities within Novo Nordisk's focus areas.

**INTANGIBLE FIXED ASSETS** Intangible fixed assets are stated at cost less accumulated amortization and write-downs. Amortization is provided under the straight-line method over the expected useful life of the asset as follows:

- ⊙ Acquired patents and licences are amortized over periods up to 10 years.
- ⊙ Goodwill is amortized over a period not exceeding 20 years.

If the carrying amount of patent, licence or goodwill is higher than the recoverable value the asset is written down to the higher of value in use or net selling price.

Goodwill represents any cost in excess of identifiable net assets, measured at fair value, in the acquired company. Goodwill relating to subsidiaries is recorded under 'Intangible fixed assets' and goodwill relating to associated companies is recorded under 'Fixed assets investments'.

**TANGIBLE FIXED ASSETS** Tangible fixed assets are stated at cost less accumulated depreciation and write-downs. Cost includes direct costs for engineering work carried out by group companies. Interests on loans financing construction of major investments are also included in the cost of the assets. Costs of major IT projects regarding development of software for intercompany use are capitalised under 'Other equipment'.

Depreciation is provided under the straight-line method over the estimated useful lives of the assets as follows:

- ⊙ Buildings; 12–50 years.
- ⊙ Plant and machinery; 5–16 years.
- ⊙ Other equipment; 3–16 years.
- ⊙ Minor fixed assets below DKK 50,000 and fixed assets with limited expected useful lives are charged to the profit and loss account in the year of acquisition.

If the carrying amount of tangible fixed assets is higher than the recoverable value the asset is written down to the higher of value in use or net selling price.

**LEASES AND RENTAL AGREEMENTS** Leases of assets whereby the group assumes substantially all the benefits and risks of ownership are capitalised as financial leases under 'Tangible fixed assets' and depreciated over the estimated useful life of the assets, according to the rates listed above.

Operational lease costs are expensed on a current basis in the profit and loss account over the lease period.

**FIXED ASSET INVESTMENTS** Participating interests in associated companies are recorded under the equity method, ie at the respective share of the associated companies' net assets applying the Group accounting policies.

Other securities and participating interests are stated at market value at the balance sheet date. Realised and unrealised gains and losses (net) are included in financial income/financial expenses.

The Group holds a limited amount of Novozymes shares as hedge for share options to current Novo Nordisk employees granted before the demerger of Novozymes in 2000. These shares are valued at the average exercise price.

**STOCKS** Raw materials and consumables are stated at cost determined according to the first-in first-out principle.

Work in progress and finished goods are stated at cost determined according to the first-in first-out principle. Cost comprises direct production costs such as raw materials and consumables including energy and labour, and indirect production costs such as employee costs, depreciation, maintenance etc.

Goods, where the expected sales price less completion costs and costs to execute the sales (net realisable value) is lower than cost, are written down to net realisable value.

**DEBTORS** Debtors are stated at amortised cost less write-downs for potential losses on doubtful debts. The write-downs are based on individual assessments of each debtor, which also include an evaluation of payment risk associated with individual countries.

**CURRENT ASSET INVESTMENTS** Current asset investments are stated at market value at the balance sheet date. Realised and unrealised gains and losses (net) are recorded as financial income/financial expenses.

**TAX** Deferred tax is provided under the liability method and covers all temporary differences between the accounting and tax values of the assets and liabilities except for goodwill in cases where amortization of goodwill is not allowed for tax purposes. Further deferred tax is provided for re-taxation of losses realised in foreign companies, if the re-taxation is expected to be realised by the company's departure from the joint taxation. The tax value of tax loss carryforwards will be set off against deferred tax liabilities to the extent that the tax losses are expected to be utilised in the future. Deferred tax is provided at the tax rate expected to be in force at the time when the temporary difference is expected to be offset.

Tax payable/receivable includes tax payable computed on the basis of the expected taxable income for the year and adjustments to tax payable for previous years.

Corporation tax in the profit and loss account includes tax payable for the year with addition of the change in deferred tax for the year.

The parent company has chosen to be assessed jointly for Danish tax purposes with certain of its foreign and domestic subsidiaries. The domestic jointly taxed companies are included in the Danish on-account tax scheme.

**PROVISIONS FOR RETURNED PRODUCTS** Provisions for returned products include expected lost contribution because of expected future returns. The provisions have been calculated based on historic statistical calculations.

**PENSIONS** Costs related to the Group's various defined benefit plans are accrued over the expected working life of the employee. Provisions are made on unfunded pensions plans based on the present value of the pension commitment. The change in the provisions for the year is expensed in the profit and loss account.

Costs related to defined contribution plans are expensed in the profit and loss account as incurred and deferred pension costs are carried under other debt.

**LONG-TERM DEBT AND SHORT-TERM LIABILITIES** Long-term debt and other liabilities are stated at amortised cost.

**FINANCIAL INSTRUMENTS** Forward exchange contracts and currency options hedging receivables and debt in foreign currencies are recorded at market value at the balance sheet date and value adjustments are recognised in the profit and loss account under financial income or financial expenses.

Exchange rate adjustments of forward exchange contracts and currency options hedging future income and expenses are measured at market value in the balance sheet, and deferred from the profit and loss account via other comprehensive income, under shareholder's funds, until the hedged income or expenses are realised.

Forward Rate Agreements (FRAs) are used to hedge the interest risks on financial assets and liabilities and are recorded at market value. All value adjustments are recorded in the profit and loss account under financial income or financial expenses.

Currency swaps are used to hedge net investments in subsidiaries. Currency swaps are recorded based on the difference between the swap rate and the exchange rate at the balance sheet date and the value adjustment is taken directly to shareholders' funds.

**OWN SHARES** Own shares are considered as a de facto capital write-down, and therefore the cost of acquisition is deducted directly from shareholders' funds. A part of the Groups own shares is held as hedge for share options granted.

**SHARE OPTIONS** Share options granted have an exercise price corresponding to the market price of the shares at the date of grant or issuance, and all share options granted have been hedged by the Group's holding of own shares and shares in Novozymes. Consequently, no cost or obligation at the date of grant or in connection with any subsequent value adjustment is recognised.

**DIVIDENDS** Dividends are recorded in the period in which they are declared at the Annual General Meeting.

**SEGMENT INFORMATION** Novo Nordisk considers the business activities as the primary segment. Novo Nordisk is engaged in discovery, development, manufacturing and marketing of pharmaceutical products and has only one business segment – healthcare. Within the healthcare segment Novo Nordisk has four main therapy areas.

Net turnover by therapy areas and geographical areas and tangible assets by geographical areas are disclosed in Note 2.

**CONSOLIDATED STATEMENT OF CASH FLOWS AND FINANCIAL RESOURCES** The Consolidated statement of cash flows and financial resources is presented in accordance with the indirect method commencing with net profit. The statement shows cash flows for the year, the net change in cash and cash equivalents for the year and the cash and cash equivalents at the beginning and the end of the year.

Cash flow from operating activities comprises net profit adjusted for non-cash operating items, interest received, interest paid, income taxes paid, and changes in working capital. Working capital consists of current assets less current liabilities, excluding those items that are included in cash and cash equivalents.

Cash flow from investing activities comprises the acquisition and sale of intangible and tangible fixed assets and fixed asset investments.

On the acquisition or sale of companies and activities, cash flow is adjusted for additions and disposals of assets and liabilities. The purchase price is recorded as the value of the assets acquired including any goodwill and acquisition costs. The sales price is recorded after deduction of trade costs.

Cash flow from financing activities comprises the proceeds from and the repayment of principal on mortgage loans, other long-term debt, dividends, the proceeds from share issues, as well as the purchase and sale of own shares.

Cash and cash equivalents comprise cash at bank and in hand and current asset investments less short-term bank loans due on demand. Besides cash and cash equivalents undrawn committed credit facilities expiring after more than 1 year are included in financial resources.

**UNITED STATES GENERALLY ACCEPTED ACCOUNTING PRINCIPLES (US GAAP)** The Group prepares a reconciliation of the effect on shareholders' funds and the profit and loss account of the application of US Generally Accepted Accounting Principles (US GAAP) in lieu of Danish principles. Note 33 to the Consolidated financial statements discloses US GAAP reconciliation.

## 2 Therapy and geographical information

DKK million

	2001	2000	1999
<b>Net turnover by therapy areas:</b>			
Diabetes care	16,624	14,578	11,777
Haemostasis management (NovoSeven®)	3,096	2,270	1,313
Growth hormone therapy	2,164	2,107	1,721
Hormone replacement therapy	1,435	1,306	1,130
Other	457	550	482
	<b>23,776</b>	<b>20,811</b>	<b>16,423</b>

<b>Net turnover by geographical areas:</b>			
Europe	11,502	9,905	8,286
US	4,853	3,747	2,427
Japan	4,079	4,385	3,404
Rest of the world	3,342	2,774	2,306
	<b>23,776</b>	<b>20,811</b>	<b>16,423</b>

Net turnover is attributed to geographical areas based on the location of the customer.

<b>Tangible fixed assets by geographical areas:</b>		
Denmark	11,789	9,016
US	481	486
Japan	401	446
Rest of the world	955	951
	<b>13,626</b>	<b>10,899</b>

### 3 Employee costs

DKK million	2001	2000	1999
Wages and salaries	6,218	5,312	4,450
Pensions	329	271	235
Other contributions to social security	379	368	322
Other employee costs	509	401	259
	<b>7,435</b>	<b>6,352</b>	<b>5,266</b>

Included in the profit and loss account under the following headings:

Production costs	2,233	1,782	1,605
Sales and distribution costs	2,256	1,843	1,439
Research and development costs	1,253	1,215	1,096
Administrative expenses	1,209	1,178	913
	<b>6,951</b>	<b>6,018</b>	<b>5,053</b>

Included in the balance sheet as:

Capitalised employee costs related to assets in course of construction etc	387	278	205
Change in employee costs included in stocks	97	56	8
	<b>7,435</b>	<b>6,352</b>	<b>5,266</b>

Remuneration to the Executive Committee excl share options

20	22	20
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Total remuneration to the Board of Directors

3	4	4
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In addition a severance pay amounting to DKK 4 million was paid to the Management in connection with the demerger of Novozymes in 2000. For information on employee shares and Management's share options etc please refer to Note 27.

2001	2000	1999
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Average number of full-time

employees in the Novo Nordisk Group	14,771	12,698	11,822
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### 4 Depreciation and amortization

DKK million	2001	2000	1999
Included in the profit and loss account under the following headings:			
Production costs	751	665	598
Sales and distribution costs	83	64	64
Research and development costs	150	165	161
Administrative expenses	93	140	116
Goodwill related to associated companies	4	4	4
	<b>1,081</b>	<b>1,038</b>	<b>943</b>

### 5 Fees to statutory auditors

DKK million	2001	2000	1999
Fees to:			
PricewaterhouseCoopers	52	42	29
Ernst & Young	3	3	1
of which statutory audit fee to PricewaterhouseCoopers	14	12	11
of which statutory audit fee to Ernst & Young	1	1	1

### 6 Licence fees and other operating income (net)

For 2001, this item primarily includes one-off income from settlement of a patent dispute with Aventis and a non-refundable upfront payment in connection with the now discontinued collaboration with Novartis regarding NN622.

For 2000, this item primarily includes one-off income from settlement of patent disputes with Eli Lilly and sale of product rights in the US of hormone replacement therapy products, and to a limited extent licence fees related to Seroxat®.

For 1999, this item primarily includes licence fees related to Seroxat®.

### 7 Financial income

DKK million	2001	2000	1999
Interest receivable	297	326	197
Capital gain on investments etc (net)	–	56	21
Foreign exchange gain (net)	202	–	–
Total financial income	<b>499</b>	<b>382</b>	<b>218</b>

### 8 Financial expenses

DKK million	2001	2000	1999
Interest payable	105	142	80
Capital loss on investments etc (net)	18	–	–
Foreign exchange loss (net)	–	195	300
Other financial expenses	9	24	18
Total financial expenses	<b>132</b>	<b>361</b>	<b>398</b>
Additional interest expenses capitalised as financing interest under tangible fixed assets:	17	18	50

## 9 Corporation tax

DKK million	2001	2000	1999
Current tax on profit for the year	1,852	1,660	1,319
Deferred tax on profit for the year	408	113	31
Tax on profit for the year	2,260	1,773	1,350
Adjustments related to previous years (net)	(95)	(20)	(2)
Corporation tax in profit and loss account	2,165	1,753	1,348
Tax on entries on shareholders' funds related to current tax	(64)	(26)	(99)
Tax on entries on shareholders' funds related to deferred tax	(57)	141	—
Tax on entries on shareholders' funds	(121)	115	(99)
<b>Computation of effective tax rate:</b>			
Statutory corporation tax rate in Denmark	30.0%	32.0%	32.0%
Non-tax deductible expenses less non-taxable income	0.8%	(0.6%)	0.6%
Effect of Danish tax relief for foreign income	—	—	(0.3%)
Deviation in foreign subsidiaries' tax rates compared to Danish tax rate (net)	6.0%	6.1%	5.6%
Other	(0.9%)	0.3%	(0.1%)
Effective tax rate (before special items)	35.9%	37.8%	37.8%
Effect on deferred taxes of change in Danish tax rate in 2000	—	(1.6%)	—
Effect of corporation taxes outside Denmark in relation to restructuring	—	—	2.5%
Effective tax rate	35.9%	36.2%	40.3%

## 10 Earnings per share

Earnings per share of a nominal value of DKK 2 is calculated based on an average number of shares outstanding (total number of shares excluding Novo Nordisk's holding of own shares). Diluted earnings per share is calculated based on the average number of shares outstanding, including outstanding options on Novo Nordisk's own shares with an exercise price below market value (options in the money).

	2001	2000	1999
Net profit (DKK million)	3,865	3,087	2,001
Average number of shares outstanding	345,712,994	349,193,370	357,543,286
Average number of options in the money outstanding	2,447,906	979,348	355,000
Average number of shares outstanding including options in the money	348,160,900	350,172,718	357,898,286
Earnings per share (DKK)	11.18	8.84	5.60
Earnings per share diluted (DKK)	11.10	8.82	5.59

## 11 Intangible fixed assets

DKK million	Goodwill	Patents and licences	Total
Cost at the beginning of the year	169	21	190
Disposals during the year	–	(2)	(2)
Cost at the end of the year	169	19	188
Amortisation at the beginning of the year	141	17	158
Amortisation for the year	16	1	17
Amortisation reversed on disposals during the year	–	(1)	(1)
Amortisation at the end of the year	157	17	174
Carrying amount at the end of the year	12	2	14

At the end of 2000 Goodwill amounted to DKK 28 million and Patents and licences amounted to DKK 4 million.

## 12 Tangible fixed assets

DKK million	Land and buildings	Plant and machinery	Other equipment	Payments on account and assets in course of construction	Total
Cost at the beginning of the year	6,982	5,396	2,528	1,860	16,766
Exchange rate adjustments	(18)	(13)	(14)	(1)	(46)
Additions during the year	172	487	388	2,896	3,943
Disposals during the year	(64)	(117)	(403)	–	(584)
Transfer from/(to) other items	107	440	80	(627)	–
Cost at the end of the year	7,179	6,193	2,579	4,128	20,079
Depreciation at the beginning of the year	1,628	2,706	1,533	–	5,867
Exchange rate adjustments	(5)	(7)	(8)	–	(20)
Depreciation for the year	243	533	284	–	1,060
Depreciation reversed on disposals during the year	(40)	(111)	(303)	–	(454)
Depreciation at the end of the year	1,826	3,121	1,506	–	6,453
Carrying amount at the end of the year	5,353	3,072	1,073	4,128	13,626

## 13 Fixed asset investments

DKK million	Amounts owed by affiliated companies	Participating interests in associated companies	Other securities and participating interests	Total
Cost at the beginning of the year	25	993	183	1,201
Additions during the year	–	199	59	258
Disposals during the year	(25)	(3)	(18)	(46)
Transfer from other items	–	18	–	18
Cost at the end of the year	–	1,207	224	1,431
Revaluation reserve at the beginning of the year	–	26	(93)	(67)
Net profit/(loss)	–	(107)	–	(107)
Other adjustments	–	145	(37)	108
Transfer from other items	–	36	–	36
Revaluation reserve at the end of the year	–	100	(130)	(30)
Carrying amount at the end of the year	–	1,307	94	1,401

Carrying amount of participating interests in associated companies includes net capitalised goodwill, DKK 82 million at the end of the year.

Amortisation of goodwill for the year was DKK 4 million. Additions to goodwill during 2001 amounted to DKK 60 million.

At the end of 2000, goodwill amounted to DKK 26 million.

Of net loss of participating interests in associated companies, DKK 156 million related to ZymoGenetics Inc and Aradigm Corporation, is included in research and development costs.

## 14 Stocks

DKK million	2001	2000
Raw materials and consumables	733	613
Work in progress	2,681	2,035
Finished goods	1,346	1,324
Stocks	4,760	3,972
Indirect production costs included in work in progress and finished goods	1,888	1,611

## 15 Trade debtors

DKK million	2001	2000
Trade debtors (gross)	4,411	3,977
Write-down for doubtful debtors:		
Balance at the beginning of the year	581	549
Write-down charged to the profit and loss accounts	63	43
Used/reversed during the year	(115)	(11)
Balance at the end of the year	529	581
Trade debtors	3,882	3,396
Trade debtors (gross) are equal to an average credit period of (days)	68	70

## 16 Other debtors

DKK million	2001	2000
Prepayments to public authorities	555	–
Prepayments and accrued income	436	329
Interest receivable	47	77
Market value of financial instruments	243	426
Other receivables	404	401
Total other debtors	1,685	1,233

## 17 Current asset investments

DKK million	2001	2000
Bonds	1,373	2,449
Trust units and shares	29	118
Total current asset investments	1,402	2,567
At original acquisition cost	1,450	2,545
Duration of the Group's bond portfolio (years)	1.5	1.0
Redemption yield of interest on the Group's bond portfolio	4.3%	5.1%

## 18 Share capital

Share capital at the end of the year	DKK	Equal to number of shares of DKK 2 each
A share capital	107,487,200	53,743,600
B share capital	601,901,120	300,950,560
Total share capital	709,388,320	354,694,160

Development in share capital	2001 DKK million	2000 DKK million	1999 DKK million	1998 DKK million	1997 DKK million
A share capital	107	107	107	107	107
B share capital at the beginning of the year	647	647	647	643	643
Additions to B share capital during the year	—	—	—	4	—
Reduction of B share capital during the year	(45)	—	—	—	—
At the end of the year	709	754	754	754	750

Own shares	No of shares of DKK 2	In % of share capital before cancellation	In % of share capital after cancellation	Market value DKK million
Holding at the beginning of the year	31,557,160	8.37%		8,994
Cancellation of own shares	(22,500,000)	(5.97%)		(6,413)
Holding of own shares, adjusted for the cancellation	9,057,160	2.40%	2.55%	2,581
Purchase during the year	87,500		0.03%	24
Sale during the year	(1,127,337)		(0.32%)	(133)
Value adjustment				270
Holding at the end of the year	8,017,323		2.26%	2,742

In order to maintain capital structure flexibility, it was decided at the General Meeting in March 2001 to reduce the B share capital by cancellation of nominally DKK 45 million of own B shares, which corresponded to 5.97% of the total share capital.

Acquisition of own shares during the year are the final part of the share buy-back programme announced in 1999, which was initiated in order to create added shareholder value and to manage cash flow and capital structure.

Sale of own shares mainly relates to the employee share programme, exercised share options and management's purchase of shares at fair value under an incentive programme related to the demerger of Novozymes in 2000.

Of own shares 3,125,094 shares are regarded as hedge for the share options issued, please refer to Note 27.

## 19 Provision for deferred tax (net)

DKK million	2001	2000
At the beginning of the year	970	802
Deferred tax on profit for the year	408	113
Adjustment relating to previous years	40	(136)
Tax on entries on shareholders' funds	(57)	141
Exchange rate adjustments	(3)	50
	<b>1,358</b>	970
Specification		
Tangible fixed assets	1,318	1,316
Indirect production costs	566	483
Unrealised profit on intercompany sales	(708)	(656)
Write-down for doubtful debtors	(128)	(139)
Other	310	(34)
	<b>1,358</b>	970

Calculation of deferred taxes in Denmark is based on a tax rate of 30%, while deferred tax in other countries is based on current local tax rates.

## 20 Other provisions

DKK million	Provisions for pension commitments and similar obligations	Provisions for returned products	Other provisions	Total
At the beginning of the year	186	249	88	523
Exchange rate adjustments	(5)	–	–	(5)
	181	249	88	518
Additional provisions	80	160	1	241
Reversed during the year	(1)	(16)	(20)	(37)
Charged to profit and loss account	79	144	(19)	204
Used during the year	(19)	(103)	(59)	(181)
At the end of the year	241	290	10	541
Specification of provisions:				
Long-term	238	160	7	405
Short-term	3	130	3	136
	241	290	10	541

## 21 Banks and other credit institutions

DKK million	2001	2000
Mortgage debt and other secured loans with terms between 2006–2016 and interest rates at 4.2% -10.0%, excl amounts falling due within 1 year (DKK 1 million in 2001 and DKK 1 million in 2000)	160	161
Unsecured loans and other long-term loans with terms between 2004–2007 and interest rates at 0.5% -3.4%, excl amounts falling due within 1 year (DKK 41 million in 2001 and DKK 48 million in 2000)	703	789
At the end of the year	863	950
The debt is payable within the following periods as from the balance sheet date:		
Between 1 and 2 years	42	49
Between 2 and 3 years	576	46
Between 3 and 4 years	43	602
Between 4 and 5 years	31	46
After 5 years	171	207
	863	950
The debt is denominated in the following currencies:		
DKK	6	10
EUR	436	438
JPY	421	502
	863	950

Adjustment of the above loans to market value at year-end 2001 would mean a cost of DKK 2 million.

## 22 Bank loans

DKK million	2001	2000
Bank loans and overdrafts	<b>775</b>	772
Long-term debt, amounts falling due within 1 year	<b>42</b>	49
	<b>817</b>	821
The debt is denominated in the following currencies:		
DKK	<b>112</b>	51
EUR	<b>306</b>	616
USD	<b>284</b>	6
JPY	<b>42</b>	52
Other currencies	<b>73</b>	96
	<b>817</b>	821

At year-end the Group had undrawn committed credit facilities amounting to DKK 5,046 million.

All of these were in foreign currencies. The current maturities of the undrawn committed credit facilities exceeds 1 year.

## 23 Other short-term liabilities

DKK million	2001	2000
Employee costs payable	<b>1,075</b>	843
Taxes and duties payable	<b>111</b>	252
Accruals and deferred income	<b>1,275</b>	524
Other creditors	<b>1,680</b>	1,902
	<b>4,141</b>	3,521

## 26 Cash and cash equivalents

DKK million	2001	2000	1999
Cash and cash equivalents consist of cash, current asset investments less short-term bank loans.			
Total current asset investments at the beginning of the year	<b>2,567</b>	2,172	1,148
Receipts from current assets investments	<b>(6,337)</b>	(2,732)	(6,358)
Outlays for current assets investments	<b>5,232</b>	3,098	7,344
Unrealised gain/(loss) on current assets investments	<b>(60)</b>	29	43
Unrealised foreign exchange gain/(loss)	<b>-</b>	-	(5)
Current asset investments at the end of the year	<b>1,402</b>	2,567	2,172
Cash at the end of the year	<b>1,660</b>	1,278	1,270
Cash and current asset investments at the end of the year	<b>3,062</b>	3,845	3,442
Short-term bank loans at the end of the year	<b>(775)</b>	(772)	(947)
Cash and cash equivalents at the end of the year	<b>2,287</b>	3,073	2,495
Current asset investments with remaining term to maturity exceeding 3 months at the end of the year	<b>1,402</b>	1,352	2,156
Cash and current asset investments with remaining term to maturity not exceeding 3 months at the end of the year	<b>1,660</b>	2,493	1,286
Cash and current assets investments at the end of the year	<b>3,062</b>	3,845	3,442

## 24 Other reversals with no effect on cash flow

DKK million	2001	2000	1999
Loss from sale of tangible fixed assets	<b>33</b>	105	75
Write-down for doubtful debtors	<b>63</b>	43	109
Unrealised (gain)/loss on shares and bonds etc	<b>60</b>	(29)	(21)
Unrealised foreign exchange (gain)/loss	<b>106</b>	58	(292)
Share of (profit)/loss in associated companies	<b>107</b>	4	2
Other	<b>108</b>	59	191
Other reversals with no effect on cash flow	<b>477</b>	240	64

## 25 Effect of ZymoGenetics Inc's deconsolidation in 2000

In connection with a private placement of new shares in ZymoGenetics Inc in 2000, the company became an associated company and was consequently no longer included in the consolidation. This reduced the Group's cash and cash equivalents by DKK 427 million corresponding to the cash at 9 November 2000 in ZymoGenetics Inc.

## 27 Employee shares and Management's share options etc

### Employee shares

In December 2001, 991,591 B-shares were sold to employees of Novo Nordisk A/S and its Danish subsidiaries. The shares were sold at a favourable price of DKK 100 per share compared to a market price on the allotment date of DKK 314 per share. A similar employee share program will be offered to employees of foreign subsidiaries in 2002. The total number of shares sold amounts to 0.28% of the total number of shares in Novo Nordisk A/S and was sold from Novo Nordisk's holding of own shares. The proceeds from the sale of the shares was taken directly to shareholders' funds.

### Share options

As from 1998 Novo Nordisk has established share option schemes for the Executive Committee and other management employees. Each option gives the right to purchase one Novo Nordisk share and the granting of share options is subject to the achievement of certain performance and shareholder value goals based on the long-term financial targets.

The options are exercisable 3 years after the issue date and will expire 6 to 8 years from that date. For options granted up to and including the Financial Statements for 1999, the options were issued at an exercise price corresponding to the market price of the shares at the time of issuance of the options. Options as from 2000 are issued at an exercise price corresponding to the market price of the shares at the time when the share option scheme was established.

Share options in Novo Nordisk	BoD *) and Executive Committee No	Other management employees No	Total No	Exercise price per option in DKK	Market value per option in DKK **)	Market value in DKK million **)
Outstanding at the beginning of 1999	74,250	385,250	459,500	140	50	23
Granted in respect of 1999 (issued on 23 March 2000)	49,500	638,000	687,500	198	55	38
Value adjustment						(2)
Outstanding at the end of 1999	123,750	1,023,250	1,147,000	175	51	59
Granted in respect of 2000 (issued on 22 February 2001)	78,000	685,000	763,000	198	124	95
Granted in connection with the demerger (issued on 31 January 2001)	279,040	422,540	701,580	198	172	120
Assigned to Novo A/S in 2000	(22,500)	(112,750)	(135,250)	188	81	(11)
Expired/cancelled in 2000	-	(18,000)	(18,000)	188	81	(1)
Value adjustment						59
Outstanding at the end of 2000	458,290	2,000,040	2,458,330	188	131	321
Granted in respect of 2001 (issued on 8 February 2002)	43,500	652,244	695,744	332	111	77
Assigned from Novo A/S in 2001		29,520	29,520	194	169	5
Exercised in 2001	(35,500)	(20,500)	(56,000)	188	131	(7)
Expired/cancelled in 2001		(2,500)	(2,500)	131	131	-
Value adjustment						113
Outstanding at the end of the year	466,290	2,658,804	3,125,094	220	163	509
Number of share options exercisable at the end of the year	10,500	12,500	23,000	190	158	4

\*) Retired members of the former Corporate Management (Mads Øvlisen and Kurt Anker Nielsen) are Board members in Novo Nordisk today. The share options outstanding to Board members were issued to these Board members, when they were part of Corporate Management.

\*\*) Calculation of market values at issuance and at year-end have been based on the Black-Scholes option pricing model. The following assumptions have been used for the calculation in 2001: a dividend per share of DKK 3.35, a volatility of 36%; the risk-free interest rate has been computed at 4.5% and the expected option life has been fixed at 1 year after the expiry of the vesting period.

Options granted prior to the demerger of Novozymes in 2000 have been split into one Novo Nordisk option and one Novozymes option.

At the end of the year the Group's outstanding Novozymes options amount to 381,606 with an average exercise price of DKK 95 per share of DKK 10 and a market value of DKK 33 million. These options are hedged by the Group's holding of Novozymes shares, which are recorded at the average exercise price.

### Management's holding of Novo Nordisk shares and share options

The internal rules on trading in Novo Nordisk securities by members of the Board of Directors and the Executive Committee permit trading in the 15 calendar days' period following each quarterly announcement.

The holding and trading of this group's shares appears from the following table:

No of shares in Novo Nordisk	Board of Directors	Executive Committee	Total
Holding of shares at the beginning of the year	60,995	29,495	90,490
Shares purchased during 2001	42,025	18,150	60,175
Shares sold during 2001	(10,850)	-	(10,850)
Holding of shares at the end of the year	92,170	47,645	139,815

Total holding of shares at the beginning of the year had a market value of DKK 26 million whereas the market value at year-end 2001 amounts to DKK 48 million, based on the quoted share price at year-ends 2000 and 2001.

The purchase of shares in 2001 for the Executive Committee primarily relates to the purchase of shares under an incentive scheme in connection with the demerger of Novozymes in 2000 and the shares were purchased at fair value.

## 27 Employee shares and Management's share options etc (continued)

No of share options in Novo Nordisk	At the beginning of the year	Exercised during the year	Granted during the year	At the end of the year	Market value *) DKK million
Board of Directors:					
Mads Øvlisen	127,830	(19,500)	–	108,330	18
Kurt Anker Nielsen **)	37,840	–	–	37,840	6
	165,670	(19,500)	–	146,170	24
Executive Committee:					
Lars Rebien Sørensen	84,000	(3,000)	14,500	95,500	16
Jesper Brandgaard	48,030	–	7,250	55,280	9
Lars Almbom Jørgensen	53,530	(4,000)	7,250	56,780	9
Kåre Schultz	53,530	(3,500)	7,250	57,280	9
Mads Krogsgaard Thomsen	53,530	(5,500)	7,250	55,280	9
	292,620	(16,000)	43,500	320,120	52
Total	458,290	(35,500)	43,500	466,290	76

\*) Calculation of market values at issuance and at year-end have been based on the Black-Scholes option pricing model. The following assumptions have been used for the calculation in 2001: a dividend per share of DKK 3.35, a volatility of 36%; the risk-free interest rate has been computed at 4.5% and the expected option life has been fixed at one year after the expiry of the vesting period.

\*\*) In addition, Kurt Anker Nielsen has share options in Novo Nordisk, which were transferred to Novo A/S in 2000. During the year, 10,000 of these options were exercised, and 26,000 options were outstanding at the end of the year.

### Redundancy schemes

The members of the Executive Committee are, in the event of termination by the Company or by the member due to a merger, acquisition or takeover by another company, entitled to a severance payment of 36 months salary plus pension contribution.

## 28 Hedging activities

The major part of Novo Nordisk's sales is in currencies other than DKK, whereas a significant part of the costs are in DKK. Thus, exchange rate fluctuations may have a significant impact on both the profit and loss account and on the balance sheet in the form of transaction risk and translation risk.

Novo Nordisk hedges existing balances and future expected cash flows up to several months forward in the major currencies.

Recognised assets and liabilities in foreign currency and the hedging hereof are shown in the table below. The table include assets and liabilities in currencies other than basis currency in each entity within the Group.

Gains and losses on the assets and liabilities (hedged items) and the hedging of financial instruments (derivatives) are included in the profit and loss account.

### Hedging of assets and liabilities in foreign currency

DKK million	Assets	Liabilities	Net assets	Hedged via financial instruments	Net assets with transaction risk	Exchange rate at 31 Dec 2001 (for 100 units)
EUR	976	754	222	–	222	743.57
USD	1,938	649	1,289	(1,289)	–	840.95
JPY	463	269	194	(194)	–	6.41
GBP	322	66	256	(256)	–	1,218.57
Other	1,439	438	1,001	(365)	636	–
	5,138	2,176	2,962	(2,104)	858	

The translation risk illustrated in the table below is the risk arising from translation of net investments in foreign subsidiaries into DKK.

The gains/losses are taken directly to 'other comprehensive income' under shareholders' funds.

### Hedging of net investments in foreign subsidiaries

DKK million	Net investment in foreign subsidiaries	Hedged via currency swaps	Net assets with translation risk	Exchange rate at 31 Dec 2001 (for 100 units)
EUR	572	(300)	272	743.57
USD	931	(252)	679	840.95
JPY	543	(320)	223	6.41
GBP	132	–	132	1,218.57
Other	937	–	937	–
	3,115	(872)	2,243	

## 29 Financial instruments

Novo Nordisk hedges commercial exposure only and consequently does not enter into speculative positions. Currency forwards and options hedging transaction risk are recorded at market value in the balance sheet, and value adjustments are recognised in the profit and loss account. Unrealised gains and losses on financial contracts hedging future expected cash flows (cash flow hedges) are deferred from the profit and loss account via 'Other comprehensive income' under shareholders' funds, until the hedged item is recognised.

The following table illustrates financial contracts and deferred gains and losses at the balance sheet date.

DKK million	Contract amount based on agreed rates	Gain/(loss) in revaluation to market value at 31 Dec 2001	Gain/(loss) included in 2001 profit and loss account	Gain/(loss) taken directly to shareholders' funds 31 Dec 2001	Deferred gain/(loss) via shareholders' funds	Interest margin p a	Maturity periods mth year
<b>Forward exchange contracts, net sales</b>							
USD	3,797	(38)	(12)	–	(26)		Jan 02–Jan 03
JPY	1,993	147	–	–	147		Jan 02–Jan 03
GBP	718	(12)	(5)	–	(7)		Jan 02–Dec 02
CAD	370	3	1	–	2		Jan 02–Feb 03
	6,878	100	(16)	–	116		
<b>Options</b>							
EUR/USD (purchased USD put)	543	4	–	–	4		Jan 02–Nov 02
EUR/JPY (purchased JPY put)	1,048	68	–	–	68		Jan 02–Dec 02
	1,591	72	–	–	72		
<b>Currency and interest rate swaps</b>							
JPY/DKK	314	–	–	–	–	4.05%	Dec 11
Hedging of transaction risk	8,783	172	(16)	–	188		
<b>Currency and interest rate swaps</b>							
EUR/DKK	302	6	1	1	4	0.78%	May 06
USD/DKK	252	–	–	–	–	0.73%	Nov 03
JPY/DKK	390	84	9	70	5	5.35%/4.85%	Sep 02/May 05
Hedging of translation risk	944	90	10	71	9		

The financial contracts existing at the end of the year cover expected future cash flow of key currencies in the following periods:

USD	9 months
JPY	14 months
GBP	9 months

The Group is not considered to have significant credit risk on financial counter parties. For further information on financial risk factors, please refer to 'Financial discussion'.

### 30 Contingent assets, liabilities and pending litigation

DKK million	2001	2000
<b>Contingent liabilities</b>		
Rental and lease commitments expiring within the following periods as from the balance sheet date:		
Within 1 year	<b>229</b>	188
Between 1 and 2 years	<b>195</b>	177
Between 2 and 3 years	<b>143</b>	90
Between 3 and 4 years	<b>118</b>	68
Between 4 and 5 years	<b>108</b>	61
After 5 years	<b>340</b>	207
	<b>1,133</b>	791

The above rental and lease commitments are related to non-cancellable operating lease contracts. Approximately 60% of the commitments are related to contracts outside Denmark. The rental/lease costs for 2001 and 2000 were DKK 428 million and DKK 404 million respectively.

Contractual obligations relating to investments in tangible fixed assets	<b>1,347</b>	742
Contractual obligations related to research and development projects	<b>1,583</b>	775
Other guarantees and commitments	<b>1,281</b>	1,071

#### Biobrás

In December 2001 Novo Nordisk announced an agreement whereby Novo Nordisk given certain conditions will become the controlling shareholder of the Brazilian diabetes care company, Biobrás. In total Novo Nordisk will pay an amount equal to DKK 262 million for shares representing 76% of the voting shares of Biobrás and 39% of the total share capital in the company. Following the expected completion of the acquisition in 2002 Novo Nordisk plan to launch a de-listing tender offer for all of the remaining shares in Biobrás.

#### Security for debt

Land, buildings and equipment etc at carrying amount	<b>798</b>	824
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### 30 Contingent assets, liabilities and pending litigation (continued)

#### Pending litigation

In Poland the authorities have charged a number of international pharmaceutical companies with mis-statement of customs value. No legal action has been brought against Novo Nordisk. The risk of legal actions against Novo Nordisk and the outcome of possible legal actions from the Polish authorities is uncertain.

In addition the Novo Nordisk Group is engaged in certain litigation proceedings. In the opinion of the Management, settlement or continuation of these proceedings will not have a material effect on the financial position of the Group.

#### Liability for the debts and obligations of Novozymes following the demerger of Novozymes in 2000

Novo Nordisk A/S and Novozymes A/S are subject to joint and several liability for any obligation which existed at the time of the announcement of the demerger in 2000. At the end of the year the remaining part of the joint and several liability in Novozymes A/S amounted to 596 million.

Debts and obligations pertaining to the period before 1 January 2000, which is recognised after 1 January 2000 and which cannot be clearly attributed to either Novo Nordisk A/S or Novozymes A/S will be distributed proportionally between the two.

### 31 Shareholders' funds and net profit for 1999 including the Novozymes Group

As a result of the demerger in 2000 of the former Novo Nordisk A/S into the new Novo Nordisk A/S and Novozymes A/S, the comparative figures for 1999 of Novo Nordisk are derived from the accounts of the former Novo Nordisk and are presented as if Novo Nordisk has existed without the enzymes business (discontinued operations).

Shareholders' funds for 1999, including discontinued operations, is equal to shareholders' funds of the new Novo Nordisk Group as a healthcare company, DKK 15,876 million, plus shareholders' funds of discontinued operations (the Novozymes Group), DKK 3,350 million – in total DKK 19,226 million.

Net profit for 1999, including discontinued operations, is equal to net profit of the Novo Nordisk Group as a healthcare company, DKK 2,001 million, plus net profit of discontinued operations (the Novozymes Group), DKK 410 million – in total DKK 2,411 million.

## 32 Related party transactions

Related parties are considered to be the Novo Nordisk Foundation, Novo A/S, the Novozymes Group due to joint ownership, associated companies, and the directors and officers of these entities and the Management of Novo Nordisk.

Following the demerger, Novo Nordisk has access to certain assets of and can purchase certain services from Novo A/S and the Novozymes Group and vice versa. All agreements relating to such assets and services have been negotiated at arm's length, and most of these agreements are for 1 year.

During 2001 and 2000 the Novo Nordisk Group had the following material transactions with related parties:

DKK million	2001 Purchase/ (sale)	2000 Purchase/ (sale)
<b>Novo A/S</b>		
Facilitation and stakeholder relation services etc	60	99
Services provided by the Novo Nordisk Group	(23)	(23)
Sale of NN Invest 5 A/S	–	(28)
<b>The Novozymes Group</b>		
Sales of B-shares in the former Novo Nordisk A/S	–	(189)
Services provided by the Novo Nordisk Group	(438)	(365)
Services provided by the Novozymes Group	93	68
<b>Associated companies</b>		
Sales to associated companies	(103)	(83)
Fees and royalties etc paid to associated companies	351	7
Equity contribution to associated companies	210	–

There have not been any material transactions with the Novo Nordisk Foundation or with any director or officer of Novo Nordisk A/S, the Novozymes Group, Novo A/S, the Novo Nordisk Foundation or associated companies. For information on remuneration to the Management of Novo Nordisk A/S, please refer to Notes 3 and 27.

Apart from the balances included in the balance sheet under 'Amounts owed to affiliated companies' there are no unsettled transactions with related parties at the end of the year.

## 33 Reconciliation to US GAAP

A description of the Group's accounting policies is set out in Note 1. The accounting principles generally accepted in the United States (US GAAP) differ within certain areas from the Group's policies. The principal areas for which US GAAP differ can be summarised as follows:

- a) **Employee shares** – according to Danish GAAP employee shares issued or sold at a favourable price is recorded under shareholders' funds irrespective of the discount. According to US GAAP the difference between market price and the sales price should be recorded under employee costs in the profit and loss account.
- b) **Options and share-based awards** – under Danish GAAP, no expense is recorded because these schemes are hedged by own shares. Under US GAAP, for fixed plans the intrinsic value of the option is recorded as an expense at the date of grant. If the plan is variable, the intrinsic value of the option is adjusted in subsequent reporting periods until the time when the terms of the award can be determined.
- c) **Financial instruments** – according to Danish GAAP foreign exchange contracts and options hedging future cash flow are measured at market value and unrealised value adjustments are deferred via shareholders' funds. Under US GAAP such contracts and options are recognised at marked value, and the value adjustments are recorded in the profit and loss account.
- d) **Restructuring costs** – under Danish GAAP costs in connection with the restructuring were taken to the profit and loss account in 1999. Under US GAAP such costs can only be charged to the profit and loss account when the costs have been incurred.
- e) **Unrealised capital gain on investments in research and development companies** – according to Danish GAAP the gain on a capital injection where the shareholding of Novo Nordisk is diluted is recognised in the profit and loss account. Under US GAAP the gain is taken directly to shareholders' funds when the issued securities are not common stock or the main activity of the investee is research and development.
- f) **Goodwill on investments in research and development companies** – according to Danish GAAP goodwill is capitalised and amortized over the expected useful life of the asset. Under US GAAP costs in excess of net assets is considered to be in process research and development costs which are charged to the profit and loss account immediately.
- g) **Discontinued operations (Novozyms)** – under US GAAP the results of discontinued operations have been included until the date of the demerger. Consequently the results of Novozymes have been included until 13 November 2000. The income recorded during 2000 becomes part of the net assets which are distributed in the form of dividend to shareholders in connection with the demerger.
- h) **In the Statement of cash flow and financial resources** – financial resources comprise current assets investments, cash and short-term bank loans. According to US GAAP, cash and cash equivalents consist solely of cash and current asset investments only with a remaining term to maturity of less than 3 months. Current asset investments with remaining term to maturity exceeding 3 months are presented as investing activities, and short-term bank loans are recorded as financing activities.

### 33 Reconciliation to US GAAP (continued)

DKK million	2001	2000	1999
<b>The application of the US GAAP described would have resulted in the following adjustments to the Group's net profit:</b>			
Net profit in accordance with Danish GAAP	<b>3,865</b>	3,087	2,001
Employee shares	<b>(213)</b>	–	(90)
Options and share-based awards	<b>(27)</b>	(93)	–
Financial instruments	<b>(139)</b>	327	73
Restructuring costs	–	(125)	125
Unrealised capital gain on investments in research and development companies	<b>(48)</b>	(19)	–
Goodwill on investments in research and development companies	<b>(60)</b>	–	–
Tax on the above mentioned differences between Danish GAAP and US GAAP	<b>114</b>	(29)	(43)
Net profit from continuing operations in accordance with US GAAP	<b>3,492</b>	3,148	2,066
Net profit from discontinued operations (Novozymes)	–	408	392
Net profit in accordance with US GAAP	<b>3,492</b>	3,556	2,458
Earnings per share from continued operations in accordance with US GAAP in DKK	<b>10.10</b>	9.01	5.78
Earnings per share diluted from continued operations in accordance with US GAAP in DKK	<b>10.03</b>	8.98	5.69
Earnings per share in accordance with US GAAP in DKK	<b>10.10</b>	10.18	6.87
Earnings per share diluted in accordance with US GAAP in DKK	<b>10.03</b>	10.14	6.76
<b>The application of the described US GAAP would have resulted in the following adjustments to shareholders' funds:</b>			
Shareholders' funds in accordance with Danish GAAP	<b>20,137</b>	16,981	15,876
Restructuring costs	–	–	125
Net assets of discontinued operations according to US GAAP	–	3,758	3,350
Net assets of discontinued operations – dividend to shareholders	–	(3,758)	–
Goodwill on investments in research and development companies	<b>(60)</b>	–	–
Tax arising from the difference between Danish GAAP and US GAAP	–	(105)	(40)
Shareholders' funds in accordance with US GAAP	<b>20,077</b>	16,876	19,311
<b>The application of the described US GAAP would have resulted in the following adjustments to balance sheet items:</b>			
According to Danish GAAP:			
Fixed assets investments	<b>1,401</b>	1,134	292
Current liabilities	<b>(6,006)</b>	(5,496)	(4,941)
In accordance with US GAAP:			
Fixed assets investments	<b>1,341</b>	1,134	292
Current liabilities	<b>(6,006)</b>	(5,496)	(4,856)
Net assets of discontinued operations	–	–	3,350

# Profit and loss account Novo Nordisk A/S

DKK million	Note	2001	2000	1999
Net turnover	2	<b>18,347</b>	15,725	12,250
Production costs	3	<b>7,149</b>	5,429	4,177
Gross profit		<b>11,198</b>	10,296	8,073
Sales and distribution costs	3	<b>3,348</b>	3,137	2,556
Research and development costs	3	<b>3,347</b>	2,544	2,099
Administrative expenses	3, 4	<b>789</b>	1,096	840
Restructuring expenses		—	—	350
Licence fees and other operating income (net)	5	<b>795</b>	880	972
Operating profit		<b>4,509</b>	4,399	3,200
Profit before tax in subsidiaries		<b>1,131</b>	441	287
Share of profit in associated companies		<b>48</b>	(2)	2
Financial income	6	<b>457</b>	322	189
Financial expenses	7	<b>115</b>	320	329
Profit before taxation		<b>6,030</b>	4,840	3,349
Corporation tax	8	<b>2,165</b>	1,753	1,348
<b>Net profit</b>		<b>3,865</b>	3,087	2,001
<i>Proposed appropriation of net profit:</i>				
Dividends		<b>1,161</b>	916	691
Net revaluation reserve		<b>190</b>	—	—
Retained earnings		<b>2,514</b>	2,171	1,310
		<b>3,865</b>	3,087	2,001

DKK million	Note	31 Dec 2001	31 Dec 2000
<b>ASSETS</b>			
Intangible fixed assets	9	10	15
Land and buildings		4,420	4,431
Plant and machinery		2,647	2,187
Other equipment		633	568
Fixed assets in course of construction and payments on account		4,031	1,812
<b>Tangible fixed assets</b>	10	<b>11,731</b>	<b>8,998</b>
Participating interests in subsidiaries		1,313	1,848
Amounts owed by affiliated companies		317	27
Participating interests in associated companies		236	136
Other securities and participating interests		87	90
<b>Fixed asset investments</b>	11	<b>1,953</b>	<b>2,101</b>
<b>Total fixed assets</b>		<b>13,694</b>	<b>11,114</b>
Stocks	12	3,921	3,186
Trade debtors		1,155	947
Amounts owed by affiliated companies		3,360	3,256
Tax receivable		391	-
Other debtors	13	1,344	805
<b>Debtors</b>		<b>6,250</b>	<b>5,008</b>
<b>Current asset investments</b>	14	<b>1,387</b>	<b>2,505</b>
<b>Cash at bank and in hand</b>		<b>1,393</b>	<b>994</b>
<b>Total current assets</b>		<b>12,951</b>	<b>11,693</b>
<b>Total assets</b>		<b>26,645</b>	<b>22,807</b>
<b>SHAREHOLDERS' FUNDS AND LIABILITIES</b>			
Share capital	15	709	754
Share premium account		2,565	2,565
Net revaluation reserve according to the equity method		344	154
Retained earnings		16,519	13,508
<b>Total shareholders' funds</b>		<b>20,137</b>	<b>16,981</b>
Provision for deferred tax (net)		1,033	945
Other provisions	16	309	342
<b>Total provisions</b>		<b>1,342</b>	<b>1,287</b>
Banks and other credit institutions	17	160	161
Amounts owed to affiliated companies		533	556
<b>Long-term debt</b>		<b>693</b>	<b>717</b>
Bank loans		8	47
Trade creditors		594	588
Amounts owed to affiliated companies		1,519	1,398
Tax payable		-	48
Other short-term liabilities	18	2,352	1,741
<b>Short-term liabilities</b>		<b>4,473</b>	<b>3,822</b>
<b>Total long-term debt and short-term liabilities</b>		<b>5,166</b>	<b>4,539</b>
<b>Total shareholders' funds and liabilities</b>		<b>26,645</b>	<b>22,807</b>

# Statement of changes in shareholders' funds Novo Nordisk A/S

DKK million	Share capital	Share premium account	Net revaluation reserve 1)	Retained earnings	Total
<b>1999</b>					
Balance at the beginning of the year	754	2,565	633	11,335	15,287
Effect of change in accounting policies				489	489
Restated balance at the beginning of the year	754	2,565	633	11,824	15,776
Appropriated from net profit for the year				1,310	1,310
Proposed dividends				691	691
Transfer from net revaluation reserve according to the equity method			(260)	260	—
Purchase of own shares				(1,448)	(1,448)
Dividends declared				(562)	(562)
Exchange rate adjustment of participating interests in subsidiaries				7	7
Reversal of deferred (gain)/loss on future cash flow hedges at the beginning of the year				73	73
Other adjustments				29	29
Balance at the end of the year	754	2,565	373	12,184	15,876

At the beginning of the year a revaluation reserve of DKK 12 million has been dissolved and transferred to retained earnings.

DKK million	Share capital	Share premium account	Net revaluation reserve 1)	Retained earnings	Total
<b>2000</b>					
Balance at the beginning of the year	754	2,565	373	12,184	15,876
Appropriated from net profit for the year				2,171	2,171
Proposed dividends				916	916
Transfer from net revaluation reserve according to the equity method			(219)	219	—
Purchase of own shares				(2,472)	(2,472)
Sale of own shares to Novozymes				189	189
Value adjustment of Novozymes shares (net)				773	773
Dividends declared				(691)	(691)
Exchange rate adjustment of participating interests in subsidiaries				(108)	(108)
Deferred gain/(loss) on future cash flow hedges at the end of the year				327	327
Balance at the end of the year	754	2,565	154	13,508	16,981

DKK million	Share capital	Share premium account	Net revaluation reserve 1)	Retained earnings	Total
<b>2001</b>					
Balance at the beginning of the year	754	2,565	154	13,508	16,981
Appropriated from net profit for the year				2,514	2,514
Proposed dividends				1,161	1,161
Appropriated from net profit for the year to net revaluation reserve according to the equity method			190		190
Write-down of B share capital during the year	(45)			45	—
Purchase of own shares				(24)	(24)
Sale of own shares				34	34
Employee shares sold				168	168
Dividends declared				(916)	(916)
Exchange rate adjustment of participating interests in subsidiaries				112	112
Reversal of deferred (gain)/loss on future cash flow hedges at the beginning of the year				(327)	(327)
Deferred gain/(loss) on future cash flow hedges at the end of the year				188	188
Other adjustments				56	56
Balance at the end of the year	709	2,565	344	16,519	20,137

1) Net revaluation reserve according to the equity method.

## Contents of notes

### Notes – Accounting policies

#### 1 Accounting policies

### Notes to Profit and loss account

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## 1 Accounting policies

The Parent company financial statements have been prepared in accordance with the new Danish Company Accounts Act of 7 June 2001 and the accounting regulations for companies listed on the Copenhagen Stock Exchange.

At 1 January 2001 the accounting policies have been changed to comply with the new Danish Company Accounts Act of 7 June 2001 – please see section 'Consolidated financial statements for 2001' and the table below.

The accounting policies for the Parent company are the same as for the Group with the following additions. For a description of the accounting policies of the Group please see Note 1 in the Consolidated financial statements.

### SUPPLEMENTARY ACCOUNTING POLICIES FOR THE PARENT COMPANY

**FIXED ASSET INVESTMENTS** In the Parent company financial statements participating interests in subsidiaries and associated companies are recorded under the equity method, ie at the respective share of the net assets in subsidiaries or associated companies. Any cost in excess of net assets in the acquired company is capitalised in the Parent company under 'Fixed asset investments' as part of participating interests in subsidiaries ('Goodwill'). For amortisation of goodwill, see 'Intangible fixed assets' in Note 1 to the Consolidated financial statements.

Net profit of subsidiaries less unrealised intercompany profits on stocks is recorded in the profit and loss account of the Parent company.

To the extent it exceeds declared dividends from such companies, net revaluation of participating interests in subsidiaries and associated companies is transferred to net revaluation reserve according to the equity method under shareholders' funds.

**CASH FLOW STATEMENT** No separate cash flow statement has been prepared for the parent company – please see the Consolidated cash flow statement.

### Effect of change in accounting policies for Novo Nordisk A/S

DKK million	2001	2000	1999
Debtors before changes in accounting policies	6,062	4,681	5,755
Financial instruments	188	327	–
Debtors after changes in accounting policies	6,250	5,008	5,755
Short-term liabilities before changes in accounting policies	5,634	4,738	4,139
Proposed dividends	(1,161)	(916)	(691)
Short-term liabilities after changes in accounting policies	4,473	3,822	3,448
Shareholders' funds before changes in accounting policies	18,788	15,738	15,185
Financial instruments	188	327	–
Proposed dividends	1,161	916	691
Shareholders' funds after changes in accounting policies	20,137	16,981	15,876

## 2 Therapy and geographical information

DKK million	2001	2000	1999
Net turnover by therapy areas:			
Diabetes care	<b>12,985</b>	10,822	8,778
Haemostasis management (NovoSeven®)	<b>2,335</b>	2,010	1,179
Growth hormone therapy	<b>1,549</b>	1,519	1,085
Hormone replacement therapy	<b>1,065</b>	978	867
Other	<b>413</b>	396	341
	<b>18,347</b>	15,725	12,250
Net turnover by geographical areas:			
Europe	<b>9,582</b>	8,493	6,829
US	<b>3,465</b>	2,693	1,401
Japan	<b>2,647</b>	2,584	2,183
Rest of the world	<b>2,653</b>	1,955	1,837
	<b>18,347</b>	15,725	12,250

Net turnover is attributed to geographical areas based on the location of the customer.

## 3 Employee costs

DKK million	2001	2000	1999
Wages and salaries	<b>3,121</b>	2,599	2,240
Pensions	<b>140</b>	119	105
Other contributions to social security	<b>72</b>	55	54
Other employee costs	<b>148</b>	141	100
	<b>3,481</b>	2,914	2,499

Included in the balance sheet as:  
Change in employee costs included in stocks

**30**      60      50

For information regarding remuneration to the Board of Directors and the Executive Committee and share options please refer to Notes 3 and 27 in the Consolidated financial statements.

	2001	2000	1999
Average number of full-time employees in Novo Nordisk A/S	<b>7,136</b>	6,025	6,181

## 4 Fees to statutory auditors

DKK million	2001	2000	1999
Fees to:			
PricewaterhouseCoopers	<b>11</b>	33	20
Ernst & Young	<b>3</b>	3	1
of which statutory audit fee to PricewaterhouseCoopers	<b>4</b>	3	2
of which statutory audit fee to Ernst & Young	<b>1</b>	1	1

## 5 Licence fees and other operating income (net)

For informations regarding Licence fees and other operating income (net) please refer to Note 6 in the Consolidated financial statements.

## 6 Financial income

DKK million	2001	2000	1999
Interest receivable	<b>243</b>	298	169
Capital gain on investments etc (net)	<b>-</b>	24	20
Foreign exchange gain (net)	<b>214</b>	-	-
Total financial income	<b>457</b>	322	189
of this interest relating to subsidiaries	<b>27</b>	23	-

## 7 Financial expenses

DKK million	2001	2000	1999
Interest payable	<b>83</b>	103	47
Capital loss on investments ect (net)	<b>18</b>	-	-
Foreign exchange loss (net)	<b>-</b>	209	274
Other financial expenses	<b>14</b>	8	8
Total financial expenses	<b>115</b>	320	329
of these interest expenses relating to subsidiaries	<b>64</b>	76	45
Additional interest expenses capitalised as financing interest under tangible fixed assets	<b>17</b>	18	48

## 8 Corporation tax

For specification of corporation tax please refer to Notes 9 and 19 of the Consolidated financial statements.

## 9 Intangible fixed assets

DKK million	Goodwill
Cost at the beginning of the year	51
Cost at the end of the year	51
Amortisation at the beginning of the year	36
Amortisation during the year	5
Amortisation at the end of the year	41
Carrying amount at the end of the year	10

At the end of 2000 goodwill amounted to DKK 15 million.

## 10 Tangible fixed assets

DKK million	Land and buildings	Plant and machinery	Other equipment	Payments on account and assets in course of construction	Total
Cost at the beginning of the year	5,785	4,531	1,560	1,812	13,688
Additions during the year	87	472	141	2,824	3,524
Disposals during the year	(48)	(102)	(121)	–	(271)
Transfer from/(to) other items	107	432	66	(605)	–
Cost at the end of the year	5,931	5,333	1,646	4,031	16,941
Depreciation at the beginning of the year	1,354	2,344	992	–	4,690
Depreciation for the year	187	439	129	–	755
Depreciation reversed on disposals during the year	(30)	(97)	(108)	–	(235)
Depreciation at the end of the year	1,511	2,686	1,013	–	5,210
Carrying amount at the end of the year	4,420	2,647	633	4,031	11,731

The latest official valuation of properties of the Company for property tax purposes amounts to a total of DKK 2,737 million.

Cost of property not officially valued amounts to DKK 214 million.

## 11 Fixed asset investments

DKK million	Participating interests in subsidiaries	Amounts owed by affiliated companies	Participating interests in associated companies	Other securities and participating interests	Total
Cost at the beginning of the year	3,354	28	111	183	3,676
Additions during the year	97	317	5	52	471
Disposals during the year	(527)	(27)	(3)	(18)	(575)
Transfer from other items	–	–	18	–	18
Cost at the end of the year	2,924	318	131	217	3,590
Revaluation reserve at the beginning of the year	643	(1)	25	(93)	574
Profit/(loss) before tax (net)	1,400	–	48	–	1,452
Corporation tax on profit for the year	(857)	–	–	–	(857)
Dividends received	(357)	–	(3)	–	(360)
Exchange rate adjustments	5	–	–	–	5
Other adjustments	(95)	–	(1)	(37)	(137)
Transfer from other items	–	–	36	–	36
Revaluation at the end of the year	739	(1)	105	(130)	713
Offset against amounts owed by subsidiaries at the beginning of the year	1	–	–	–	1
Additions during the year	9	–	–	–	9
At the end of the year	10	–	–	–	10
Unrealised profit at the beginning of the year	(2,150)	–	–	–	(2,150)
Exchange rate adjustments	59	–	–	–	59
Change for the year	(269)	–	–	–	(269)
At the end of the year	(2,360)	–	–	–	(2,360)
Carrying amount at the end of the year	1,313	317	236	87	1,953

Carrying amount of participating interests in subsidiaries includes net capitalised goodwill DKK 3 million at the end of the year. Amortization for the year was DKK 10 million. No additions or disposals were made during the year. At the end of 2000 goodwill amounted to DKK 13 million.

Carrying amount of participating interests in associated companies includes net capitalised goodwill of DKK 22 million at the end of the year. Amortization of goodwill for the year was DKK 4 million. No additions or disposals were made during the year. At the end of 2000 the amount was DKK 26 million.

Participating interests in subsidiaries and associated companies are detailed on pages 40–41.

## 12 Stocks

DKK million	2001	2000
Raw materials and consumables	676	561
Work in progress	2,465	1,919
Finished goods	780	706
	<b>3,921</b>	<b>3,186</b>
Indirect production costs included in work in progress and finished goods	1,491	1,244

## 13 Other debtors

DKK million	2001	2000
Prepayments to public authorities	555	–
Prepayments and accrued income	297	202
Interest receivable	46	76
Market value of financial instruments	243	426
Other debtors	203	101
	<b>1,344</b>	<b>805</b>

## 14 Current asset investments

DKK million	2001	2000
Market value at the end of the year	<b>1,387</b>	2,505
Original acquisition cost	<b>1,436</b>	2,483

## 15 Share capital

Regarding average number of shares please refer to Note 10 in the Consolidated financial statements.

Regarding total number of A and B shares in Novo Nordisk A/S and own shares please refer to Note 18 in the Consolidated financial statements.

## 16 Other provisions

DKK million	Provisions for returned products	Other provisions	Total
At the beginning of the year	247	95	342
Additional provisions	160	–	160
Reversed during the year	(16)	(19)	(35)
Charged to the profit and loss account	144	(19)	125
Used during the year	(101)	(57)	(158)
At the end of the year	290	19	309
Specification of provisions:			
Long-term	160	16	176
Short-term	130	3	133
	290	19	309

## 17 Banks and other credit institutions

DKK million	2001	2000
Mortgage debt	<b>161</b>	162
Of which mortgage debt falling due within 1 year	<b>1</b>	1
	<b>160</b>	161
Long-term debt falling due after more than 5 years from the balance sheet date amounts to	<b>156</b>	157

## 18 Other short-term liabilities

DKK million	2001	2000
Employee costs payable	<b>525</b>	444
Other taxes and duties payable	<b>66</b>	210
Accruals and deferred income	<b>827</b>	128
Other creditors	<b>934</b>	959
	<b>2,352</b>	1,741

## 19 Contingent assets, liabilities and pending litigation

DKK million	2001	2000
<b>Contingent liabilities</b>		
Rental and lease commitments	<b>336</b>	134
Contractual obligations relating to investments in tangible fixed assets	<b>1,341</b>	742
Guarantees given for subsidiaries	<b>3,512</b>	3,391
Other guarantees and commitments	<b>1,233</b>	1,023
Contractual obligations related to research and development projects	<b>1,583</b>	775
<b>Security for debt</b>		
Land, buildings and equipment etc at net book value	<b>726</b>	731

### Biobrás

For information on the agreement with Biobrás, please refer to Note 30 in the Consolidated financial statements.

### Pending litigation and liability for debts and obligations of Novozymes following the demerger

For information on pending litigation and liability for debts and obligations of Novozymes following the demerger please refer to Note 30 in the Consolidated financial statements.

## 20 Related party transactions

For information on transactions with related parties please refer to Note 32 in the Consolidated financial statements.

	Country	Year of incorporation / acquisition	Issued share capital / paid-in capital	Percentage of shares owned	Activity			
					⊗ Production	⊗ Sales and Marketing	⊗ Research and Development	⊗ Services/finance
Subsidiaries								
Novo Nordisk Pharma Argentina S.A.	Argentina	1997	ARS	7,465,150	100	⊗		
Novo Nordisk Pharmaceuticals Pty. Ltd.	Australia	1985	AUD	500,001	100	⊗		
Novo Nordisk Pharma GmbH	Austria	1974	EUR	36,336	100	⊗		
Novo Nordisk Europe N.V.	Belgium	1998	EUR	500,000	100	⊗		
S.A. Novo Nordisk Pharma N.V.	Belgium	1974	EUR	2,559,501	100	⊗		
Novo Nordisk Farmacêutica do Brasil Ltda.	Brazil	1990	BRL	29,915,093	100	⊗		
Novo Nordisk Canada Inc.	Canada	1983	CAD	200	100	⊗		
Novo Nordisk Engineering Tianjin Co.	China	1995	CNY	1,662,940	100			⊗
Novo Nordisk Tianjin Biotechnology Co. Ltd.	China	1994	CNY	165,781,758	100	⊗	⊗	
Novo Nordisk s.r.o.	Czech Republic	1997	CZK	14,500,000	100	⊗		
FeF Chemicals A/S	Denmark	1989	DKK	10,000,000	100	⊗	⊗	
Novo Nordisk Engineering A/S	Denmark	1989	DKK	500,000	100			⊗
Novo Nordisk Farmaka A/S	Denmark	1985	DKK	500,000	100	⊗		
Novo Nordisk Invest 1 A/S	Denmark	1984	DKK	36,000,000	100			⊗
Novo Nordisk IT A/S	Denmark	1998	DKK	1,000,000	100			⊗
Novo Nordisk Pharmaceuticals A/S	Denmark	1974	DKK	1,001,000	100			⊗
Novo Nordisk Servicepartner A/S	Denmark	1998	DKK	1,000,000	100			⊗
Novo Nordisk Servicepartner Sikring A/S	Denmark	1998	DKK	1,000,000	100			⊗
Novo Nordisk Farma OY	Finland	1972	EUR	420,470	100		⊗	
Novo Nordisk Pharmaceutique S.A.	France	1959	EUR	37,949,925	100	⊗	⊗	
Hermedico GmbH	Germany	1995	EUR	25,565	100			⊗
Novo Nordisk Pharma GmbH	Germany	1973	EUR	614,062	100			
Novo Nordisk Hellas Ltd.	Greece	1979	EUR	1,027,146	100		⊗	
Novo Nordisk Hungary Ltd.	Hungary	1996	HUF	371,000,000	100		⊗	
Novo Nordisk Pharma India Ltd.	India	1994	INR	130,000,000	100		⊗	
Novo Nordisk Limited	Ireland	1978	EUR	635	100		⊗	
Novo Nordisk Ltd.	Israel	1997	ILS	100	100		⊗	
Home Care s.r.l.	Italy	1995	EUR	10,400	100		⊗	
Novo Nordisk Farmaceutici S.p.A.	Italy	1980	EUR	516,500	100		⊗	
Nippon Novo Ltd.	Japan	1979	JPY	10,000,000	100			⊗
Novo Nordisk Pharma Ltd.	Japan	1980	JPY	2,104,000,000	100	⊗	⊗	
Novo Nordisk Pharma (Malaysia) Sdn. Bhd.	Malaysia	1992	MYR	200,000	100		⊗	

	Country	Year of incorporation / acquisition		Issued share capital / paid-in capital	Percentage of shares owned	Activity	Production	Sales and Marketing	Research and Development	Services/Finance
<b>Subsidiaries</b>										
Hermedico B.V.	Netherlands	1986	EUR	18,151	100		⊙			⊙
Novo Nordisk Farma B.V.	Netherlands	1983	EUR	61,260	100		⊙			
Novo Nordisk Pharmaceuticals Ltd.	New Zealand	1990	NZD	1,000,000	100		⊙			
Novo Nordisk Scandinavia AS	Norway	1965	NOK	250,000	100		⊙			
Novo Nordisk Pharmaceuticals (Philippines) Inc.	Philippines	1999	PHP	50,000,000	100		⊙			
Novo Nordisk Pharma Sp. z.o.o.	Poland	1996	PLN	29,021,000	100		⊙			
Novo Nordisk Comércio Produtos Farmacêuticos, Ltda.	Portugal	1984	EUR	250,000	100		⊙			
Novo Investment Pte. Ltd.	Singapore	1994	SGD	7,000,000	100					⊙
Novo Nordisk Asia Pacific Pte. Ltd.	Singapore	1997	SGD	2,000,000	100		⊙			
Novo Nordisk Pharma (Singapore) Pte. Ltd.	Singapore	1997	SGD	200,000	100		⊙			
Novo Nordisk (Pty) Ltd.	South Africa	1959	ZAR	8,000	100	⊙	⊙			
Novo Nordisk Pharma Korea Ltd.	South Korea	1994	KRW	6,108,400,000	100		⊙			
Novo Nordisk Pharma S.A.	Spain	1978	EUR	1,502,500	100		⊙			
Novo Nordisk Scandinavia AB	Sweden	1971	SEK	100,000	100		⊙			
Novo Nordisk Pharma AG	Switzerland	1968	CHF	50,000	100		⊙			
Novo Nordisk Health Care AG	Switzerland	2000	CHF	155,325,000	100					⊙
Novo Nordisk Pharma (Taiwan) Ltd.	Taiwan	1990	TWD	9,000,000	100		⊙			
Novo Nordisk Pharma (Thailand) Ltd.	Thailand	1983	THB	15,500,000	49		⊙			
Novo Nordisk Saglik Ürünleri Ticaret Ltd. Sti.	Turkey	1993	TRL	T1,275,300,000	100		⊙			
Novo Nordisk Holding Ltd.	United Kingdom	1977	GBP	2,802,132	100					⊙
Novo Nordisk Limited	United Kingdom	1978	GBP	2,350,000	100		⊙			
Novo Nordisk of North America Inc.	United States	1988	USD	283,835,600	100					⊙
Novo Nordisk Pharmaceutical Industries Inc.	United States	1991	USD	55,000,000	100	⊙				
Novo Nordisk Pharmaceuticals Inc.	United States	1982	USD	2,000	100		⊙			
<b>Associated companies *)</b>										
Aldaph SpA	Algeria	1994	DZD	42,900,000	45	⊙				
DAKO A/S	Denmark	1992	DKK	48,135,000	29	⊙	⊙	⊙		
Ferrosan A/S	Denmark	1986	DKK	18,000,000	30	⊙	⊙	⊙		
ZymoGenetics Inc.	United States	1988	USD	5,803,700	49					⊙
Aradigm Corporation	United States	2001	USD	30,000,000	17				⊙	

\*) Percentage of shares owned is diluted with outstanding share options 'in the money'

Key figures in DKK (million)	1997	1998	1999	2000	2001
Net turnover	12,585	13,647	16,423	20,811	<b>23,776</b>
Net turnover by therapy areas:					
Diabetes care	8,889	9,818	11,777	14,578	<b>16,624</b>
Haemostasis management (NovoSeven®)	369	576	1,313	2,270	<b>3,096</b>
Growth hormone therapy	1,569	1,498	1,721	2,107	<b>2,164</b>
Hormone replacement therapy	1,012	1,094	1,130	1,306	<b>1,435</b>
Other	746	661	482	550	<b>457</b>
Net turnover by geographical area:					
Europe	7,191	7,880	8,286	9,905	<b>11,502</b>
US	892	1,310	2,427	3,747	<b>4,853</b>
Japan	2,716	2,546	3,404	4,385	<b>4,079</b>
Rest of the world	1,786	1,911	2,306	2,774	<b>3,342</b>
Licence fees and other operating income (net)	708	1,441	962	571	<b>867</b>
Operating profit (EBIT)	2,440	2,933	3,527	4,816	<b>5,614</b>
Net financials	385	243	(178)	24	<b>416</b>
Profit before taxation	2,825	3,176	3,349	4,840	<b>6,030</b>
Corporation tax	1,053	1,160	1,348	1,753	<b>2,165</b>
Net profit	1,772	2,016	2,001	3,087	<b>3,865</b>
Cash and current asset investments	2,928	1,476	3,442	3,845	<b>3,062</b>
Total assets	22,515	22,085	23,082	24,920	<b>28,905</b>
Total short-term liabilities	4,313	4,191	4,941	5,496	<b>6,006</b>
Long-term debt	900	997	1,007	950	<b>863</b>
Shareholders' funds	16,304	15,776	15,876	16,981	<b>20,137</b>
Investments in tangible fixed assets (net)	1,825	1,648	1,265	2,141	<b>3,846</b>
Investments in intangible assets and fixed asset investments (net)	(5)	91	29	(22)	<b>288</b>
Free cash flow	596	706	1,533	2,712	<b>186</b>
Net cash flow	760	(1,021)	1,777	560	<b>(759)</b>

**Ratios:**

## Turnover in per cent:

Diabetes care	70.6%	71.9%	71.7%	70.0%	<b>70.0%</b>
Haemostasis management (NovoSeven®)	2.9%	4.2%	8.0%	10.9%	<b>13.0%</b>
Growth hormone therapy	12.5%	11.0%	10.5%	10.1%	<b>9.1%</b>
Hormone replacement therapy	8.0%	8.0%	6.9%	6.3%	<b>6.0%</b>
Other	6.0%	4.9%	2.9%	2.7%	<b>1.9%</b>
Sales outside Denmark in per cent of net turnover	97.9%	98.5%	98.8%	98.8%	<b>99.2%</b>
Sales and distribution costs in per cent of net turnover	27.9%	30.9%	29.3%	30.1%	<b>30.3%</b>
Research and development costs in per cent of net turnover	17.4%	20.5%	16.7%	16.3%	<b>16.7%</b>
Administrative expenses in per cent of net turnover	12.1%	10.2%	10.5%	9.0%	<b>7.8%</b>
Gross profit in per cent of net turnover	71.1%	72.5%	74.3%	75.8%	<b>74.9%</b>
Operating profit margin *	19.4%	21.5%	21.5%	23.1%	<b>23.6%</b>
Growth in operating profit *	N/A	20.2%	20.3%	36.5%	<b>16.6%</b>
Pre-tax ordinary profit margin *	22.4%	23.3%	20.4%	23.3%	<b>25.4%</b>
Net profit margin *	14.1%	14.8%	12.2%	14.8%	<b>16.3%</b>
Effective tax rate *	37.3%	36.5%	40.3%	36.2%	<b>35.9%</b>
Equity ratio *	72.4%	71.4%	68.8%	68.1%	<b>69.7%</b>
Payout ratio *	20.4%	23.3%	28.7%	29.7%	<b>30.0%</b>
Return on shareholders' funds *	11.5%	12.6%	12.6%	18.8%	<b>20.8%</b>
Change in market capitalisation	79.9%	(16.5%)	13.7%	56.2%	<b>20.4%</b>
ROIC *	12.6%	14.4%	15.3%	22.0%	<b>23.1%</b>
Cash to earnings	33.6%	35.0%	76.6%	87.9%	<b>4.8%</b>
Cash to earnings 3-year average	N/A	N/A	48.4%	66.5%	<b>56.4%</b>

Key figures in EUR (million)	1997	1998	1999	2000	2001
Net turnover	1,693	1,835	2,209	2,799	3,198
Net turnover by therapy areas:					
Diabetes care	1,196	1,321	1,584	1,961	2,237
Haemostasis management (NovoSeven®)	50	77	177	305	416
Growth hormone therapy	211	201	231	283	291
Hormone replacement therapy	136	147	152	176	193
Other	100	89	65	74	61
Net turnover by geographical area:					
Europe	968	1,060	1,115	1,332	1,547
US	120	176	326	504	653
Japan	365	342	458	590	549
Rest of the world	240	257	310	373	449
Licence fees and other operating income (net)	95	194	129	77	117
Operating profit	328	394	474	648	755
Net financials	52	33	(24)	3	56
Profit before taxation	380	427	450	651	811
Corporation tax	142	156	181	236	291
Net profit	238	271	269	415	520
Cash and current asset investments	394	199	463	517	412
Total assets	3,028	2,970	3,104	3,351	3,887
Current liabilities	580	564	664	739	808
Long-term debt	121	134	135	128	116
Shareholders' funds	2,193	2,122	2,135	2,284	2,708
Investments in tangible fixed assets (net)	245	222	170	288	517
Investments in intangible assets and fixed asset investments (net)	(1)	12	4	(3)	39
Free cash flow	80	95	206	365	25
Net cash flow	102	(137)	239	75	(102)

**Share data:**

Earnings per share in DKK *	4.76	5.43	5.60	8.84	11.18
Earnings per share diluted in DKK *	4.76	5.43	5.59	8.82	11.10
Cash flow per share in DKK *	6.49	6.59	7.91	15.06	12.50
Shareholders' funds per share in DKK *	43.83	42.52	44.40	48.63	58.08
Dividend per share in DKK	1.15	1.55	1.95	2.65	3.35
Number of shares at year-end (million)	375	377	377	377	355
Number of shares outstanding at year-end (million)	372.0	362.5	354.5	345.5	346.7
Average number of shares outstanding (million) *	372.0	371.0	357.5	349.0	345.7
Average number of shares outstanding incl share options in the money (million)	372.0	371.0	357.9	350.2	348.2
Quoted price at year-end for B shares in DKK *	178	153	178	285	342
Quoted price (high) for B shares during the year in DKK	181	218	182	368	393
Quoted price (low) for B shares during the year in DKK	95	122	120	168	277
Quoted price at year-end for ADRs in USD *	26.17	24.13	23.45	35.40	40.10
Market capitalisation in DKK million *	66,398	55,452	63,052	98,507	118,563
Price/earnings *	37.46	28.16	31.77	32.24	30.59
Price/cash flow *	27.48	23.21	22.49	18.93	27.36
Price/shareholders' funds *	4.06	3.60	4.00	5.86	5.87
Earnings per share adjusted to US GAAP in DKK	5.13	5.12	6.87	10.18	10.10
Earnings per share diluted adjusted to US GAAP in DKK	5.11	5.09	6.76	10.14	10.03

**Employees (number at year-end):**

Denmark	7,005	7,338	7,409	8,766	10,131
Rest of Europe	1,673	1,753	1,999	2,122	2,407
US	899	927	988	895	1,333
Japan	775	787	740	676	696
Rest of the world	697	844	858	1,293	1,574
<b>Total</b>	<b>11,049</b>	<b>11,649</b>	<b>11,994</b>	<b>13,752</b>	<b>16,141</b>

\* For definitions, please refer to page 47.

The Groups accounting policies have been changed in 2001 in accordance with the new Danish Company Accounts Act of 2001 and figures for 1997–2000 have been restated, see page 11 for further explanation of the changes.

Figures for 1997–1999 are derived from the consolidated accounts of the former Novo Nordisk Group (prior to the demerger) – all dividends are allocated to the continuing Novo Nordisk.

Key figures are translated into EUR as supplementary information – the translation is based on currency rate at the end of the year (EUR 1 = DKK 7.4357).

Quoted prices for 1997–2000 are adjusted for the change in trading units for B shares from DKK 10 to DKK 2 and B shares/ADR from 1:2 to 1:1.

**STATEMENT FROM THE BOARD OF DIRECTORS AND THE EXECUTIVE COMMITTEE** Today the Board of Directors and the Executive Committee approved the Annual Financial Report of Novo Nordisk A/S for the year 2001. The Annual Financial Report has been prepared in accordance with the new Danish Company Accounts Act of 2001 and accounting regulation for companies listed on the Copenhagen Stock Exchange. In our opinion, the accounting policies applied are appropriate and the Annual Financial Report gives a true and fair view of the Group's and the Company's assets, liabilities, financial position, results and cash flows.

Gladsaxe, 7 February 2002

**EXECUTIVE COMMITTEE:**

Lars Rebien Sørensen  
President and CEO

Jesper Brandgaard

Lars Almbloom Jørgensen

Kåre Schultz

Mads Krogsgaard Thomsen

**BOARD OF DIRECTORS:**

Mads Øvlisen  
Chairman

Kurt Anker Nielsen  
Vice chairman

Kurt Briner

Tove Funder-Nielsen

Niels Jacobsen

Ulf J Johansson

Anne Marie Kverneland

Stig Strøbæk

Jørgen Wedel

We have audited the Annual Financial Report of Novo Nordisk A/S for 2001.

This Annual Financial Report is the responsibility of the Company's Board of Directors and Executive Committee. Our responsibility is to express an opinion on the Annual Financial Report based on our audit.

**BASIS OF OPINION** We conducted our audit in accordance with international and Danish auditing standards. These standards require that we plan and perform our audit to obtain reasonable assurance that the Annual Financial Report gives a true and fair view in all material respects. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Annual Financial Report. An audit also includes assessing the accounting policies applied and significant estimates made by the Board of Directors and the Executive Committee, as well as evaluating the overall Annual Financial Report presentation. We believe that our audit provides a reasonable basis for our opinion.

Our audit did not give rise to any qualifications.

**OPINION** In our opinion, the Annual Financial Report gives a true and fair view of the Group's and the Company's assets, liabilities, financial position and of the results of its operations and cash flows in accordance with the new Danish Company Accounts Act of 2001 and the accounting regulations for companies listed on the Copenhagen Stock Exchange.

Gladsaxe, 7 February 2002

PricewaterhouseCoopers

Ernst & Young  
Statsautoriseret Revisionsaktieselskab

Morten Iversen  
Danish State-Authorised Public Accountant

Ole B Neerup  
Danish State-Authorised Public Accountant

Lars Holtug  
Danish State-Authorised Public Accountant

Key figures in DKK (million)	2000				2001			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Net turnover	4,426	5,243	5,267	5,875	5,350	6,001	5,965	6,460
Net turnover by therapy area:								
Diabetes care	3,153	3,681	3,700	4,044	3,754	4,184	4,210	4,476
Haemostasis management (NovoSeven®)	449	585	556	680	730	769	754	843
Growth hormone therapy	440	512	541	614	457	554	527	626
Hormone replacement therapy	280	323	329	374	327	365	350	393
Other	104	142	141	163	82	129	124	122
Net turnover by geographical area:								
Europe	2,225	2,459	2,409	2,812	2,669	2,879	2,800	3,154
US	795	941	947	1,064	1,120	1,268	1,250	1,215
Japan	829	1,097	1,101	1,358	818	1,065	1,004	1,192
Rest of the World	577	746	810	641	743	789	911	899
Licence fees and other operating income (net)	328	132	71	40	321	136	231	179
Operating profit	994	1,277	1,186	1,359	1,358	1,382	1,390	1,484
Net financials	(34)	40	(33)	51	237	4	93	82
Profit before taxation	960	1,317	1,153	1,410	1,595	1,386	1,483	1,566
Corporation tax	(360)	(497)	(437)	(459)	(574)	(499)	(534)	(558)
Net profit	600	820	716	951	1,021	887	949	1,008
Total shareholders' funds	15,023	15,296	15,231	16,981	16,942	17,727	18,788	20,137
Total assets	23,486	23,382	24,795	24,920	26,228	27,321	28,774	28,905
Share data in DKK								
Earnings per share	1.70	2.35	2.06	2.74	2.95	2.57	2.75	2.91
Earnings per share diluted	1.70	2.34	2.05	2.73	2.93	2.55	2.73	2.89
Ratios								
Operating profit margin	22.5%	24.4%	22.5%	23.1%	25.4%	23.0%	23.3%	23.0%
Equity ratio	64.0%	65.4%	61.4%	68.1%	64.4%	64.9%	65.3%	69.7%
Employees								
No of employees at the end of the period	12,503	13,017	13,460	13,752	14,473	15,410	16,074	16,141

**ADRs**

American Depositary Receipts

**Average number of shares outstanding**

The average number of shares outstanding during the year (excluding the holding of own shares).

**Cash flow per share**

Cash flow from operating activities divided by the average number of shares outstanding.

**Cash/earnings**

Free cash flow as a percentage of net profit.

**Earnings per share (EPS)**

Net profit divided by the average number of shares outstanding.

**Earnings per share diluted**

Net profit divided by the sum of average number of shares outstanding and number of share options 'in the money'.

**Effective tax rate**

Corporation tax as a percentage of profit before taxation.

**Equity ratio**

Shareholders' funds at year-end as a percentage of the sum of total liabilities and shareholders' funds at year-end.

**Market capitalisation**

Total number of shares outstanding at year-end multiplied by the quoted (closing) price at year-end for Novo Nordisk's B shares on the Copenhagen Stock Exchange.

**Net profit margin**

Net profit as a percentage of net turnover.

**Number of shares outstanding at year-end**

Number of shares at year-end excluding the number of own shares.

**Operating profit (EBIT)**

Earnings before interest and tax.

**Operating profit margin**

Operating profit (EBIT) as a percentage of net turnover.

**Payout ratio**

Total dividends for the year as a percentage of net profit.

**Pre-tax ordinary profit margin**

Profit before tax as a percentage of net turnover.

**Price/cash flow**

The quoted (closing) price at year-end for Novo Nordisk's B shares on the Copenhagen Stock Exchange divided by cash flow per share.

**Price/earnings**

The quoted (closing) price at year-end for Novo Nordisk's B shares on the Copenhagen Stock Exchange divided by earnings per share.

**Price/shareholders' funds**

The quoted (closing) price at year-end for Novo Nordisk's B shares on the Copenhagen Stock Exchange divided by shareholders' funds per share.

**Quoted price at year-end for ADRs**

The quoted (closing) price at year-end for Novo Nordisk's ADRs on the New York Stock Exchange.

**Quoted price at year-end for B shares**

The quoted (closing) price at year-end for Novo Nordisk's B shares on the Copenhagen Stock Exchange.

**Return on shareholders' funds**

Net profit as a percentage of average shareholders' funds (the sum of shareholders' funds at the beginning of the year and at year-end divided by two).

**ROIC (return on invested capital)**

Operating profit after tax (using the effective tax rate) as a percentage of average stocks, debtors, tangible & intangible assets less non-interest bearing liabilities including provisions (the sum of above assets and liabilities at the beginning of the year and at year-end divided by two).

**Shareholders' funds per share**

Shareholders' funds at year-end divided by the total number of shares outstanding at year-end.

# Novo Nordisk shareholder update

Following the split on 13 November 2000 into Novo Nordisk A/S and Novozymes A/S, 2001 was the first full year where Novo Nordisk traded as a pure pharmaceutical company.

The turnover of Novo Nordisk's B shares on the Copenhagen Stock Exchange amounted to DKK 83.2 billion in 2001. The share price ended the year at DKK 342 compared with a price at year-end 2000 of DKK 285. The market value of Novo Nordisk's outstanding share capital increased by DKK 20 billion to DKK 119 billion.

**SHARE INFORMATION** Novo Nordisk's B shares are quoted on the stock exchanges in Copenhagen and London and on the New York Stock Exchange in the form of American Depositary Receipts (ADRs) with the ticker code 'NVO'. The B shares are traded in units of DKK 2. The ratio of Novo Nordisk B shares to ADRs is 1:1 (one B share to one ADR). The B shares are issued to the bearer but may upon request be registered in the holder's name in Novo Nordisk's register of shareholders. Each holding of DKK 2 of the A share capital carries 20 votes. Each holding of DKK 2 of the B share capital carries 2 votes.

Effective from 4 April 2001 the trading unit of Novo Nordisk B shares was changed from DKK 10 to DKK 2, and the ratio of B shares to ADRs from 1:2 to 1:1.

At Novo Nordisk's ordinary General Meeting on 20 March 2001 it was decided to reduce the company's B share capital from nominally DKK 646,901,120 to nominally DKK 601,901,120 by cancellation of nominally DKK 45 million of the company's holding of own B shares. The reduction of the share capital has been registered with the Danish Commerce and Companies Agency, and as such the shares can be considered cancelled. After the reduction of the capital, the company's share capital is nominally DKK 709,388,320, which is divided into an A share capital of nominally DKK 107,487,200 and a B share capital of nominally DKK 601,901,120.

**SHARE OWNERSHIP** Novo Nordisk's A share capital of nominally DKK 107,487,200 is held by Novo A/S (based in Gladsaxe, Denmark), a private limited Danish company which is 100% owned by the Novo Nordisk Foundation (based in Gentofte, Denmark). In addition, Novo A/S holds 40,973,900 B shares of nominally DKK 2. Holding 27% of the total share capital, Novo A/S controls 70% of the total number of votes. The accounts for Novo Nordisk are included in the accounts for the Novo Nordisk Foundation.

As Novo Nordisk B shares are in bearer form, no official record of shareholders exists. Based on the available sources of infor-

## INVESTOR RELATIONS

### Questions from investors

Shareholders, analysts, representatives from the financial community, brokers and other stakeholders are asked to communicate via Novo Nordisk's Investor Relations service in questions concerning Novo Nordisk and the company's business areas:

Outside North America:  
Novo Nordisk A/S  
Novo Allé  
2880 Bagsværd  
Denmark

Peter Haahr  
Phone: +45 4442 1207  
Fax: +45 4444 2314  
E-mail: pehr@novonordisk.com

Palle Holm Olesen  
Phone: +45 4442 6175  
Fax: +45 4444 2314  
E-mail: phoo@novonordisk.com

### In North America:

Novo Nordisk of North America  
405 Lexington Avenue, Suite 6400  
New York, NY 10017  
USA

Rasmus Jorgensen  
Phone: +1 212 878 9607  
Fax: +1 212 867 0298  
E-mail: rrhj@novonordisk.com

## PAYMENT OF DIVIDENDS

### Dividend tax deduction

Shareholders living in the US or Canada will receive their dividend in USD with the statutory deduction of 28% Danish tax. Shareholders in other countries will receive their dividend in DKK, also with a deduction of 28% Danish tax. Shareholders resident in other countries are eligible for a refund of dividend tax deducted in Denmark subject to the double taxation conventions in force between Denmark and the countries concerned.

Shareholders' enquiries concerning dividend payments, transfer of share certificates, consolidation of shareholder accounts and tracing of lost shares should be addressed to Novo Nordisk's transfer agents:

Outside North America:  
Danske Bank  
Holmens Kanal 2-12  
1092 Copenhagen K  
Denmark  
Phone +45 3344 0000

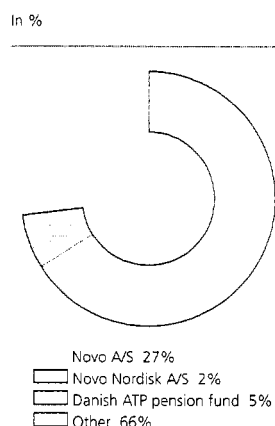
mation at the end of 2001 on the company's shareholders, it is estimated that Novo Nordisk's shares were distributed as shown in the pie chart opposite. At the end of 2001 almost 80% of the total share capital was included in Novo Nordisk's register of shareholders.

Today, Novo Nordisk A/S' entire A share capital, held by Novo A/S, carries the right to cast 1,074,872,000 votes on all matters brought before shareholders. Each Novo Nordisk B share of DKK 2 carries the right to cast two votes on all matters brought before shareholders.

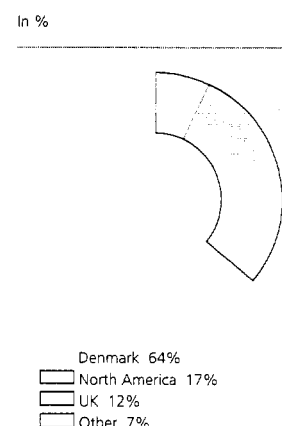
**FORM 20-F** The Form 20-F Report for the year 2000 was filed on 27 April 2001 with the US Securities and Exchange Commission and can be obtained upon request from Novo Nordisk of North America, Inc. The form 20-F for the year 2001 will be filed before the end of June 2002.

**INTERNET** Novo Nordisk's homepage for investors can be found at [www.novonordisk.com](http://www.novonordisk.com). It includes historic and updated information about our activities: press releases from 1995 and onwards, financial results, investor presentations, background information, annual reports and accounts, and environmental and social reports.

Breakdown of shareholders  
In %



Geographical distribution of shareholders  
In %



In North America:  
JPMorgan Chase Bank  
JPMorgan Service Center  
PO Box 43013  
Providence, RI 02940-3013  
USA  
Phone: +1 781 575 4328  
Fax: +1 781 575 4082

#### DIVIDEND REINVESTMENT

### Reinvestment plan for ADRs

The Automatic Dividend Reinvestment Plan for holders of American Depositary Receipts (ADRs) in Novo Nordisk A/S provides shareholders with a simple and convenient way to reinvest dividends. Enquiries concerning the plan should be addressed to:

JPMorgan Chase Bank  
JPMorgan Service Center  
(re Novo Nordisk A/S)  
PO Box 43013  
Providence, RI 02940-3013  
USA  
Phone: +1 781 575 4328  
Phone: +1 800 428 4237  
Fax: +1 781 575 4082

#### THE YEAR AHEAD

### Financial calendar for 2002

12 March	Annual General Meeting
<b>Dividend</b>	
13 March	Ex-dividend B shares and ADRs
15 March	Record date B shares and ADRs
18 March	Payment B shares
25 April	Payment ADRs

#### Announcement of financial results

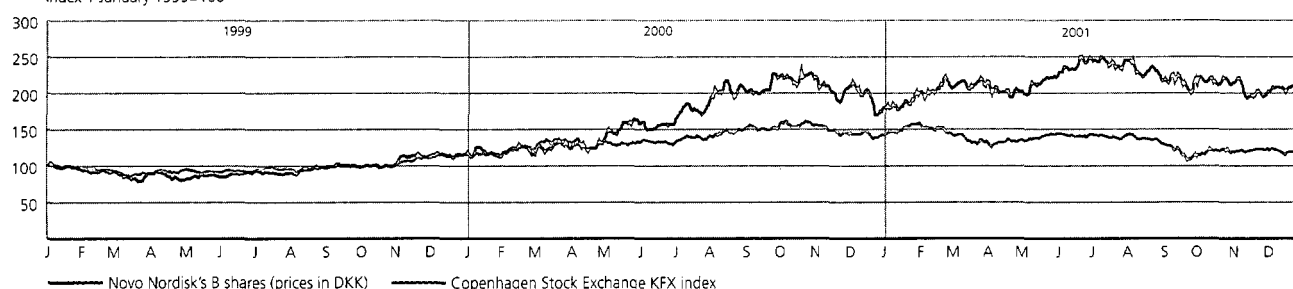
30 April	First 3 months
6 August	Half year
29 October	9 months
6 February 2003	Full year

#### Shareholder magazine available

Mid-May	First 3 months
Mid-August	Half year
Mid-November	9 months

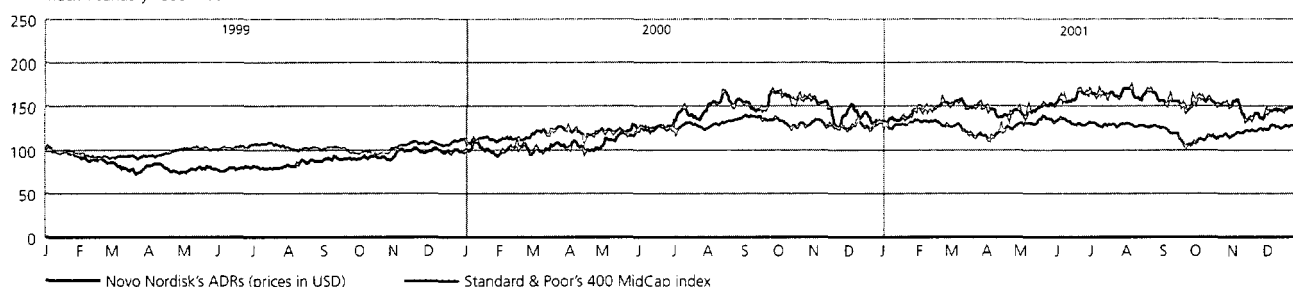
# Price development of Novo Nordisk's B shares on the Copenhagen Stock Exchange relative to the KFX index

Index 1 January 1999=100



# Price development of Novo Nordisk's ADRs on the New York Stock Exchange relative to Standard and Poor's 400 MidCap index

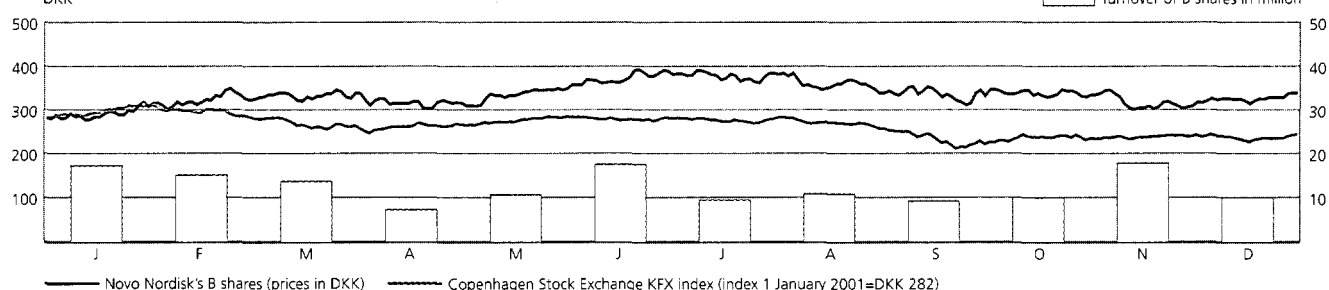
Index 1 January 1999=100



# Price development and monthly turnover of Novo Nordisk's B shares on the Copenhagen Stock Exchange, year 2001

DKK

Turnover of B shares in million



## ANNOUNCEMENTS

### Selected stock exchange announcements in 2001

**31 January**

Aventis and Novo Nordisk sign licence agreement

**20 February**

Financial results 2000

**20 March**

Annual General Meeting

**8 May**

Financial statement for the first quarter of 2001

**19 July**

Novo Nordisk and Novartis partner to commercialise novel insulin sensitiser (NN622) in North America

**7 August**

Financial statement for the first half of 2001

**7 September**

Novo Nordisk announces clinical proof of concept for NN622

**10 September**

ZymoGenetics Inc files registration statement for an initial public offering of common stock

**25 October**

Novo Nordisk invests USD 20 million in Aradigm Corporation

**29 October**

Novo Nordisk continues development of NN622 without Novartis

**6 November**

Financial statement for the first 9 months of 2001

**13 November**

Novo Nordisk launches international foundation to help combat diabetes in developing countries

**20 November**

Novo Nordisk completes Phase 2b trial of NN1998 (AERx®IDMS) and increases its investment commitment to Aradigm Corporation

**MADS ØVLISEN****KURT BRINER****TOVE FUNDER-NIELSEN****NIELS JACOBSEN****ULF J. JOHANSSON****ANNE MARIE KVERNELAND****KURT ANKER NIELSEN****STIG STRØBÆK****JØRGEN WEDEL**

**MADS ØVLISEN** Chairman. Chairman of the Boards of LEGO A/S and The Royal Theatre • **KURT BRINER** Director. Member of the Boards of CBax SA, Equity4Life AG, OM Pharma, Progenics Pharmaceuticals Inc, Institut des Vaisseaux et du Sang (IVS), and the Supervisory Board of Byk Gulden • **TOVE FUNDER-NIELSEN** Specialist laboratory technician, Novo Nordisk A/S • **NIELS JACOBSEN** President & CEO, Oticon A/S and William Demant Holding A/S. Chairman of the Board of Hearing Instrument Manufacturers Patent Partnership A/S; member of the Boards of Højgaard Holding A/S and Micro Matic Holding A/S • **ULF J. JOHANSSON** Dr Tech. Chairman of the Boards of Europolitan Holdings AB, Kungliga Tekniska Högskolan in Stockholm, Frontec AB and Zodiac Venture Capital AB; member of the Boards of Novo A/S, and Trimble Navigation Ltd • **ANNE MARIE KVERNELAND** Laboratory technician, shop steward, Novo Nordisk A/S • **KURT ANKER NIELSEN** Vice chairman. As part of Kurt Anker Nielsen's position as co-president of Novo A/S he serves as vice chairman of Novo Nordisk A/S and Novozymes A/S and as a Board member of DAKO A/S, ZymoGenetics Inc and Medicon Valley Capital AB. Further, Kurt Anker Nielsen serves as chairman of the Board of Incentive A/S and as a Board member of Coloplast A/S. • **STIG STRØBÆK** Electrician, shop steward, Novo Nordisk A/S • **JØRGEN WEDEL** Former executive vice president, the Gillette Company

**BOARD MEETINGS CALENDAR 2002:** The Board of Directors ordinarily meet seven times a year, including the meetings held at the announcements of financial results and the Annual General Meeting.



(From left to right)

**JESPER BRANDGAARD** Chief financial officer • **MADS KROGSGAARD THOMSEN** Chief science officer  
 • **LARS REBIEN SØRENSEN** President and chief executive officer, member of the Board of Scandinavian Airlines System AB and ZymoGenetics Inc • **LARS ALMBLOM JØRGENSEN** Chief operating officer • **KÅRE SCHULTZ** Chief of staffs and quality

## Management Committee

**MARIANN STRID CHRISTENSEN**  
Quality

**KLAUS EHRLICH**  
Germany, Austria, Switzerland

**PETER BONNE ERIKSEN**  
Project Management & Regulatory Affairs

**TORBEN SKRIVER FRANDSEN**  
Novo Nordisk IT

**PÅL HELMICH**  
Europe (excl Germany, Austria, Switzerland)

**JESPER HØILAND**  
International Marketing

**PER JANSEN**  
Novo Nordisk Servicepartner

**LARS GULDBÆK KARLSEN**  
Protein Delivery Systems

**LISE KINGO**  
Stakeholder Relations

**PETER KURTZHALS**  
Discovery

**ROGER MOORE**  
Japan and Oceania

**OLE RAMSBY**  
Legal Affairs

**WITTE RIJNBERG**  
International Operations

**MARTIN SOETERS**  
North America

**PER VALSTORP**  
Product Supply

**HANS OLE VOIGT**  
Novo Nordisk Engineering

## SUSTAINABLE MANAGEMENT

## Reporting on the Triple Bottom Line

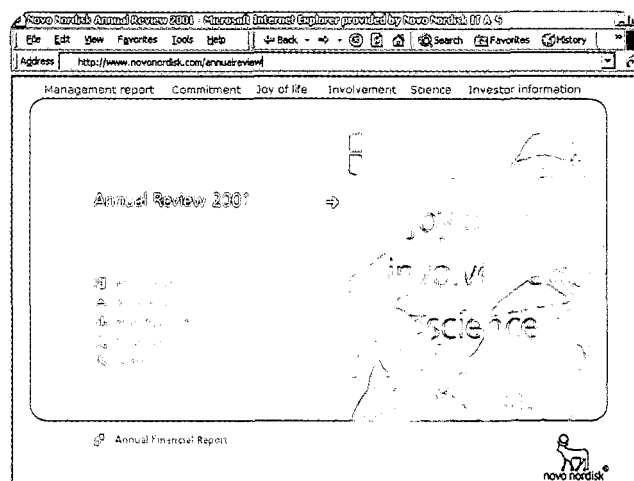
Novo Nordisk has been pursuing a consistent approach to implementing the Triple Bottom Line – social and environmental responsibility and economic viability – for more than a decade, and we report annually on our performance. Reporting is one of the methods for ensuring that the company meets the commitments made in the Novo Group's Charter. It demonstrates how we put our values into action.

Issued in March 2002, the report covers the company's activities on social and environmental responsibility and economic viability within 2001. It also establishes new targets that will guide our future direction. As such, it complements the *Annual Review* and *Annual Financial Report*.

Over the years, we have developed our reporting to reflect the changing agendas in society and in our company. This year, a major theme in the section on social responsibility is global access to health, addressing the need to facilitate better access to proper diabetes care in the poorest nations.

Our activities are in areas where values and ethics are put to the test on a daily basis. We did not create the dilemmas but we need to face them. In this report, we present some of the key issues for Novo Nordisk as a pharmaceutical company, as a global business, as a corporate citizen and as an employer of choice.

The report is available at [www.novonordisk.com/sustainability](http://www.novonordisk.com/sustainability). Hard copies of the report in both English and Danish can be ordered from the same address.



## ONLINE ANNUAL REVIEW

## Novo Nordisk is just a click away!

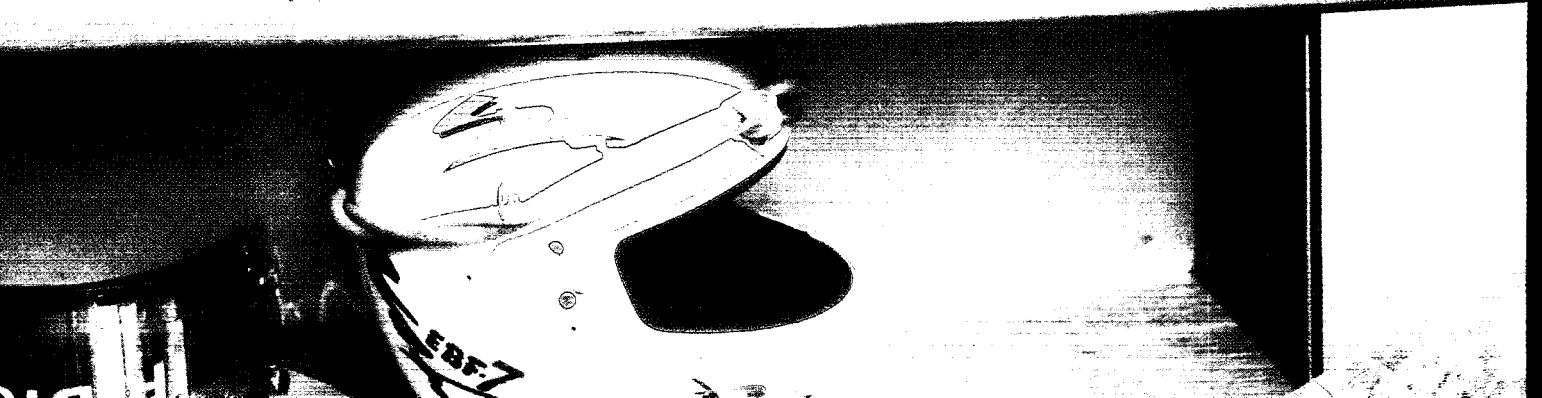
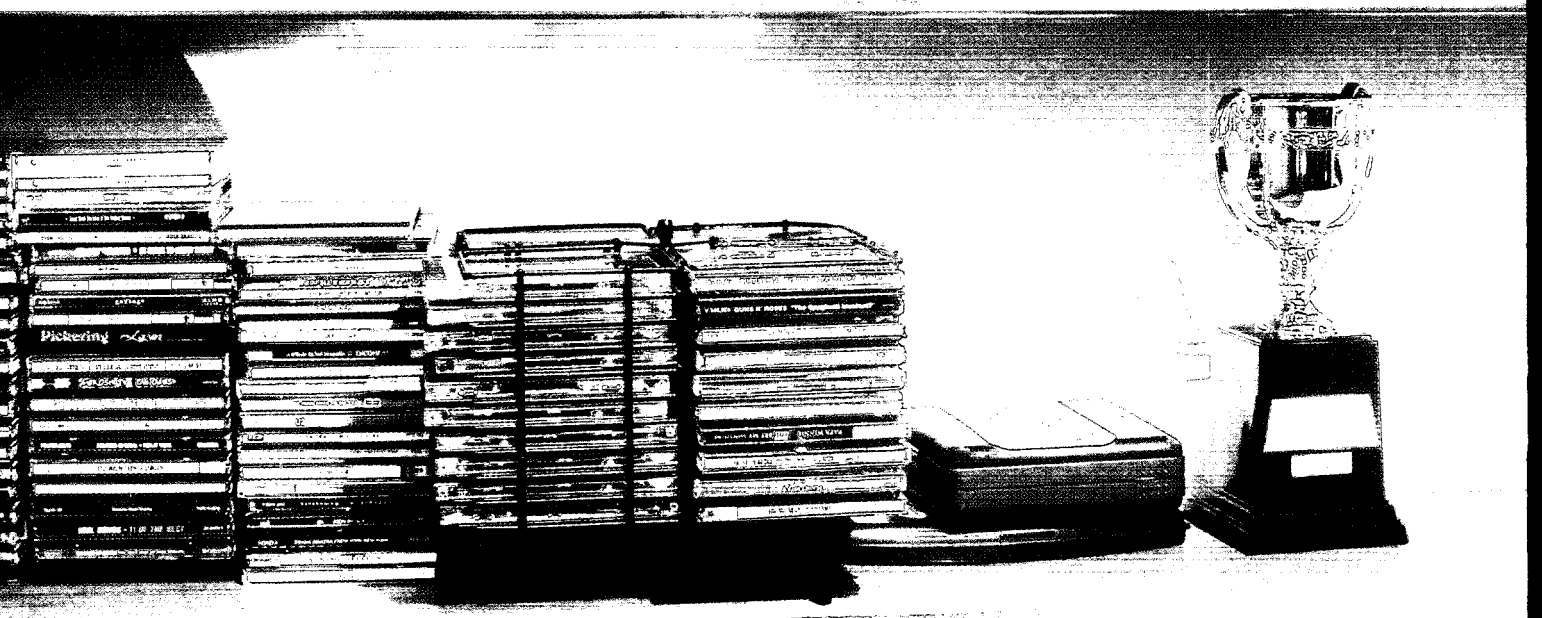
Our *Annual Review* 2001 is now available on the Internet at [www.novonordisk.com/annualreview](http://www.novonordisk.com/annualreview) featuring interactive charts and links to a host of resources, including a downloadable version of the *Annual Financial Report*.

Take the opportunity to visit us online and explore the universe of Novo Nordisk websites. From our corporate website at [www.novonordisk.com](http://www.novonordisk.com) you can access a wide range of services, from country websites to patient communities; from professional forums to children's educational materials.

You can also register for investor services including e-mail updates and shareholder newsletters, and follow our share price.



The Swan mark is a Scandinavian standard ensuring an environmentally-responsible production of printed material.



This year, for the first time, we have produced two publications – an *Annual Review* and *Annual Financial Report* – instead of the single publication produced in the past, called the annual report. The content of the single publication has been divided into two publications so that readers can more easily locate the information of interest to them. In the future shareholders will have the opportunity to select which publication they wish to receive, or indeed can select to receive both publications.

The *Annual Review* is a consumer-style review of the last year's activities and events, including feature articles on significant topics. This year the *Annual Review* has been split into four main sections called commitment, joy of life, involvement and science. These four areas are the cornerstones of our promise of 'being there'. For only by being committed to taking the cause of our customers personally, by enabling people to experience the joy of life, by continuing to be involved with partners from, for example, the healthcare system, and by investing in scientific discovery, can we continue to be successful in our chosen therapy areas.

The *Annual Financial Report* is the document that fulfils the legal criteria for an annual report, and includes the full set of accounts and notes from the Novo Nordisk Group and the parent company, Novo Nordisk A/S. The *Annual Financial Report* complies with the new Danish Company Accounts Act and accordingly the accounting policies have been changed in a few areas. The changes, which are described in detail on page 11 in the *Annual Financial Report*, have limited effect on the figures for 2004 and on comparative figures.

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CMA No 24255790



the company's sales and production. The company's sales and production are divided into three main areas: pharmaceuticals, medical devices, and consumer products. The pharmaceuticals area is the largest, followed by medical devices, and then consumer products.

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Sisters Mary and Amelia have both used Novo Nordisk insulin for over 50 years. Novo Nordisk has been committed to helping people with diabetes for a lifetime. In 2001, that came to 78 years in diabetes care.



## Contents

- Page 8 Management report ◦ Page 12 Financial highlights ◦ Page 14 Commitment ◦ Page 18 Joy of life
- Page 22 Involvement ◦ Page 26 Science ◦ Page 30 Financial review ◦ Page 33 Shareholder information
- Page 35 Board of Directors ◦ Page 36 Executive and Management Committees ◦ Page 37 Novo Nordisk publications

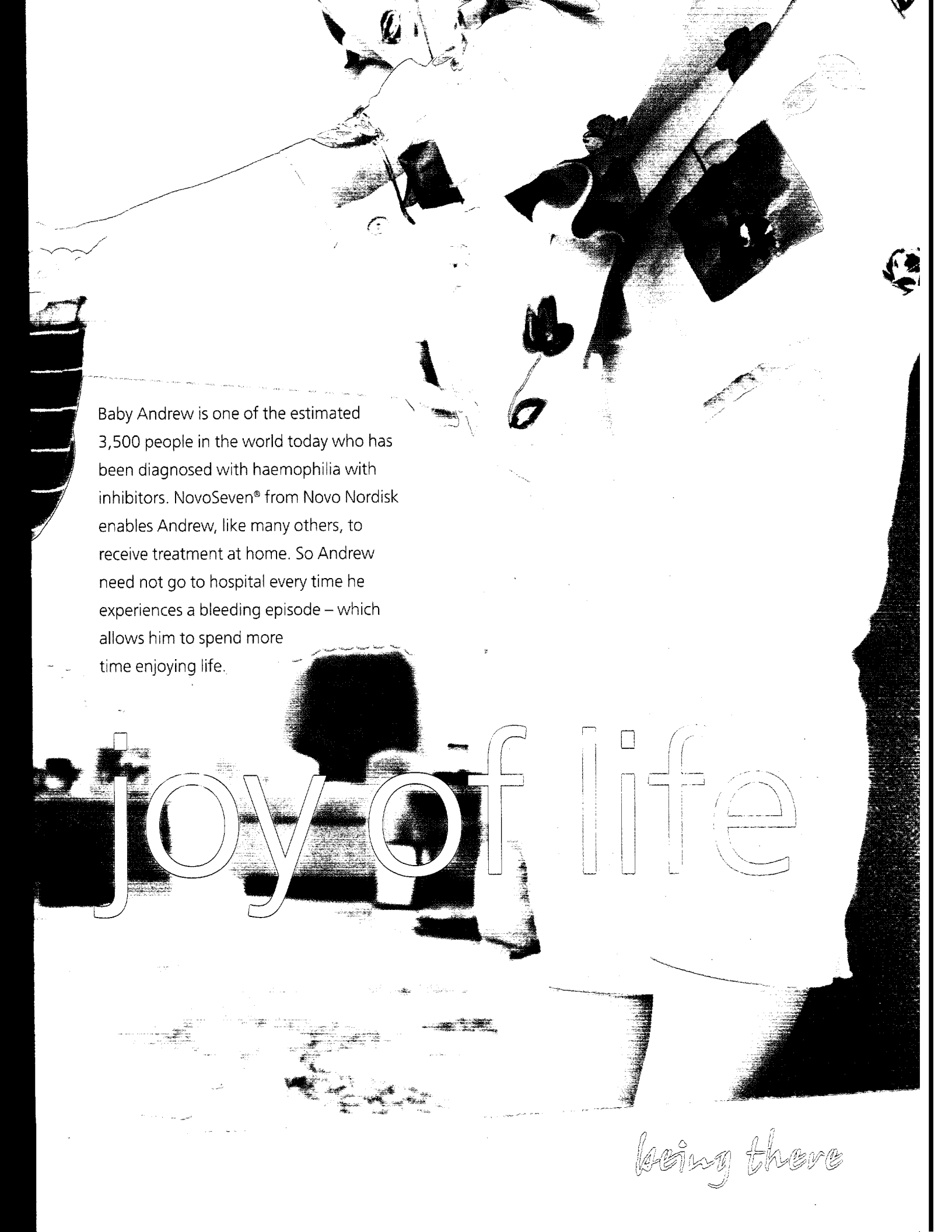
Sisters Mary Reid and Amelia Bruce (who both have Type 1 diabetes), Scotland.  
Cover photo: Damaris Wanjiku Murigi (Type 2 diabetes), Kenya.



hang there

Andrew Scott (who has haemophilia A) with his parents, New Zealand.






Baby Andrew is one of the estimated 3,500 people in the world today who has been diagnosed with haemophilia with inhibitors. NovoSeven® from Novo Nordisk enables Andrew, like many others, to receive treatment at home. So Andrew need not go to hospital every time he experiences a bleeding episode – which allows him to spend more time enjoying life.

joy of life

*being there*





# involvement

It's estimated that 70% of all new cases of diabetes will appear in the developing world. This is why Novo Nordisk is working to improve access to diabetes care in the poorest nations. Less than half the people with diabetes in these countries are diagnosed. Damaris is one of those who has been diagnosed and receives treatment.

*being there*



# science

Every person with diabetes has different wishes as Ricardo, a Championship Formula Junior racing driver, knows. Novo Nordisk is developing a range of insulin analogues, also called 'designer' insulins, so people with diabetes can tailor their treatment regime to match their lifestyle – no matter how exciting it is.



*being there*

## To all our stakeholders,

We can look back with satisfaction on 2001 as Novo Nordisk's first year as a focused healthcare company, after having demerged our enzyme business into a separate company, Novozymes A/S, in November 2000.

It was also a year in which the terrorist attack of 11 September made us reflect not only on the tragic loss of life, but on the threat and the promise implied in our increasingly globalised world. We must create or seize the opportunities that an interconnected world offers a responsible corporation in the knowledge that we will be caught in the harsh spotlight of growing public concern or resentment towards corporate power and wealth.

We are a company that puts people – not only our customers but also our employees and fellow citizens – at the forefront of its guiding philosophy. This is something we have always believed in and endeavoured to live by.

Listening to and letting ourselves be duly guided by those whom we serve and the people we work with is a condition for growing our business and creating long-term value. A commitment to the social, bioethical and environmental aspects of how we do business is just as vital as meeting our economic goals. This is what we call sustainable management, documented in our Triple Bottom Line reporting.

The year 2001 will also be remembered for the unprecedented focus on the role of the pharmaceutical industry in ensuring access to proper medical treatment in developing countries. The pharmaceutical industry was challenged on its belief that protection of patents and intellectual property rights benefits not only corporations, but also current and future generations who depend on the creation of life-saving drugs. That challenge gave us



Mads Øvlisen and Lars Rebien Sørensen.

a valuable opportunity to reflect further on our role as a responsible healthcare company. We concluded that it is possible to balance the protection of intellectual property rights with improved access to essential medicines for patients in developing countries.

In fact, given our promise of 'being there' for our customers, we believe Novo Nordisk has an obligation to contribute to better access to proper diabetes care in the poorest nations. To that effect, in November 2001 we announced plans to establish the World Diabetes Foundation, which is part of a broader Novo Nordisk initiative known as LEAD – Leadership in Education and Access to Diabetes care (see page 22).

**FINANCIAL PERFORMANCE IN 2001** We are pleased to report that Novo Nordisk performed very well in its first year as a focused healthcare company. Operating profit grew by 17% to DKK 5,614 million primarily due to sales growth of 14% to DKK 23,776 million. Measured in local currencies sales increased by 17%. Net profit grew by 25% to DKK 3,865 million.

Our overall business focus remains unchanged: we aim for world leadership in diabetes care while pursuing opportunities in three other areas: haemostasis management, growth hormone

### DIABETES CARE

## Growth in insulin business

Diabetes care is our largest area of interest. Insulin, insulin analogues and devices for injection of insulin constitute 91% of the sales in this area, the remainder is accounted for by NovoNorm® (Prandin® in the US), our oral treatment for Type 2 diabetes.

In 2001 diabetes care sales grew by 14%, with the insulin business growing 13%, and NovoNorm®/ Prandin® growing 29%. Our insulin market share in the industrialised world is 45.0%.

The growth in insulin sales is due to volume growth and a change in product mix towards more advanced products such as our rapid-acting insulin analogue NovoRapid® (NovoLog® in the US) (see

page 26). High sales growth was realised in Europe, the US and in a number of developing countries. Reported sales in Japan measured in DKK were flat due to the depreciation of the JPY and increased competition.

Sales growth in the US was to a large degree driven by the co-marketing agreement with Wal-Mart effective from August 2000, under which our insulin in vials are marketed with the shared Novolin® ReliOn® brand name. In addition, Novation, the Texas-based supply chain management company, awarded a significant contract to us in September 2001 to supply its full line of diabetes products to Novation customers. Finally in the US, the leading health improvement company AdvancePCS, in October 2001 announced that it has selected our diabetes products for inclusion on its Preferred Drug List (PDL). AdvancePCS serves 75

million health plan members, managing more than USD 21 billion annually in prescription drug spending.

We continued to roll out NovoRapid®/ NovoLog®, which was launched in the US in September and in Japan in December. NovoRapid® has been very well received by the market.

We launched two new devices for insulin injection therapy: InDuo®, the world's first combined insulin injection system and blood glucose monitor, which we produce and market together with Lifescan Inc; and FlexPen® a new prefilled insulin pen, which is expected to replace our popular NovoLet® pen. We continued the roll-out of InnoLet® and Inno® two popular insulin dosers, targeting different segments of insulin users (see page 14).

Sales of NovoNorm®/Prandin® increased by 29% to DKK 1,401 million reflecting

therapy and hormone replacement therapy (HRT). All four areas contributed to our growth in 2001:

- Diabetes care sales were up 14% to DKK 16,624 million.
- Sales within haemostasis management were up 36% to DKK 3,096 million.
- Sales within growth hormone therapy were up 3% to DKK 2,164 million.
- HRT sales were up 10% to DKK 1,435 million.

**ENVIRONMENTAL AND SOCIAL PERFORMANCE** In Novo Nordisk we have a long-standing commitment to the Triple Bottom Line – social and environmental responsibility and economic viability.

We strongly believe that in order to run a sustainable business, we must be able to demonstrate that we deliver not only economic value for our shareholders, but also value for our other stakeholders, be they customers, employees, neighbours or society at large.

To document our performance, we issue annual reports on the Triple Bottom Line, in which we highlight the many difficult issues confronting Novo Nordisk as a global player, as an employer and business partner, and as a representative of the pharmaceutical industry. Key issues include:

- Access to health, with particular focus on the developing world.
- Equal opportunities and diversity in the workplace.
- Extending social responsibility through the supply chain.
- Animal welfare and bioethics from idea to products.
- Eco-efficiency in the light of increasing production.
- Assessing the socio-economic impact of the company's activities in a global context.

The report accounts for our performance within each of these areas during 2001 and a range of new initiatives launched to address the issues in a long-term perspective (see page 37).

#### INVESTMENT IN RESEARCH AND DEVELOPMENT

Research and development is crucial for our ability to fulfil our mission in an increasingly competitive business environment.

- In 2001, we spent DKK 3,970 million on new product discovery and development.
- We established a new unit, Protein Delivery Systems, to develop innovative methods of delivering insulin and other therapeutic proteins (see page 17).
- Clinical proof of concept was obtained in September 2001 for NN622, a second generation insulin sensitiser with a dual action (see page 29).
- Our pulmonary insulin delivery device, AERx®IDMS (NN1998), developed jointly with Aradigm Corporation, successfully completed a Phase 2b study in November 2001 (see page 20).
- We initiated a number of clinical trials for NovoSeven® in a range of blood disorders and bleeding conditions (see page 18).

**INVESTMENT IN FACILITIES** In 2001, the company invested DKK 3.8 billion in new facilities. Due to the continued positive development in our business and the significant opportunities provided by our product candidates in late stage development, we expect investments to remain at this elevated level also in 2002 and 2003. Our largest investment projects are:

- The new Insulin Bulk Plant in Kalundborg, Denmark will be our primary supplier of insulin products for many years to come.
- The new NovoSeven® plant in Hillerød, Denmark will be the second factory for NovoSeven®.
- The MS-Fac2 plant in Hillerød, Denmark is designed for the production of durable insulin delivery devices.
- The device plant in Hillerød, Denmark has been extended to also produce the latest prefilled pen, FlexPen®.

**MAJOR AGREEMENTS** In January 2001 Novo Nordisk and Aventis Pharma signed an agreement, settling the lawsuit filed by Novo Nordisk in April 2000 in Germany for patent infringement relating to the long-acting insulin analogue Lantus®. This agreement increased Novo Nordisk's operating profit in 2001 by approximately DKK 250 million. Contingent on the commercial development of Lantus®, the agreement could also have a positive impact on Novo Nordisk's results in 2003 and 2004. →

sales growth in all major markets (see page 17). Sales in the US mirrored the underlying market performance, whereas sales in Europe grew significantly as NovoNorm® continues to penetrate the market.

In 2001 a number of significant late stage projects reached important milestones: NN622, a second generation insulin sensitiser with a dual action, entered Phase 3 development in November (see page 29). We are currently conducting Phase 2 trials for NN2211, an analogue of the natural hormone GLP-1 (see page 29).

Furthermore, AERx®IDMS (also known as NN1998), a pulmonary insulin delivery system, which we are developing together with Aradigm Corporation, has obtained Proof of Concept and Phase 3 trials are expected to start in 2002 (see page 20).

#### HAEMOSTASIS MANAGEMENT

### Increased demand for NovoSeven®

Sales of NovoSeven® increased by 36% to DKK 3,096 million, reflecting continued strong growth in the US and positive sales development in Europe. Several factors contributed to the sales growth. As confidence in the use of NovoSeven® in connection with surgical procedures in haemophilia patients increases so does the demand for NovoSeven®. Furthermore, NovoSeven® is increasingly being used for the treatment of acquired haemophilia and sales are also believed to have been positively affected by increased investigational use of NovoSeven®. Finally, sales have to a smaller degree been influenced by a shortage in the market of recombinant

FVIII products for use in certain segments of the haemophilia patient group.

A number of NovoSeven® clinical studies have been initiated this year and Novo Nordisk expects to start reporting from these trials during 2002 (see page 18).

Since the launch of NovoSeven® in 1996, estimating the market potential for this product has proven to be very challenging as the market consists of a narrow group of patients with very fluctuating treatment patterns. Within this patient group, consisting primarily of patients with congenital haemophilia with inhibitor and patients with acquired haemophilia, the market potential for NovoSeven® is estimated to be approximately USD 450 million.

→ In July 2001 Novo Nordisk and Novartis Pharma AG announced an agreement on the commercialisation of NN622, which gave Novartis exclusive rights to commercialise the compound in the US, Canada and Mexico. However, in October 2001 Novartis decided for strategic reasons not to continue with the collaboration. The development programme for NN622 is unaffected and Phase 3 trials have been initiated.

In October 2001 Novo Nordisk invested USD 20 million in the Aradigm Corporation common shares. As part of the agreement, Novo Nordisk will retain all of the Aradigm shares held by it for at least 2 years. In addition, following the completion of a Phase 2b clinical trial with the AERx® insulin Diabetes Management System (iDMS) in November 2001, Novo Nordisk increased its commitment to further invest in the Aradigm Corporation with a new share investment agreement of up to USD 25 million in common shares.

In December 2001 Novo Nordisk signed an agreement whereby Novo Nordisk would acquire the controlling shareholding of Biobrás SA in Brazil (see page 24). The acquisition was completed on 31 January 2002 after the existing shareholders had approved implementing a demerger of certain non-core assets of Biobrás. The acquisition gives Novo Nordisk 76% of the voting shares of Biobrás and 39% of the total capital. As previously announced, Novo Nordisk plans to submit a tender offer for all the remaining

shares of Biobrás, and then de-list the company from the São Paulo Stock Exchange. The acquisition is anticipated to be approved by the Brazilian competition authorities during 2002.

**CORPORATE GOVERNANCE** In December 2001 the Nørby Committee, established by the Danish government in March 2001, presented its recommendations for good Corporate Governance in Denmark. Novo Nordisk has for a number of years been in compliance with most of these recommendations.

The corporate governance guidelines include a recommendation for companies, which in their articles of association have voting rights differentiation on shares, to evaluate the expediency of such voting rights restrictions. Novo Nordisk is of the opinion that the current ownership structure has been, and continues to be appropriate and preferable for the long-term development of the company. A revocation of the current voting rights differentiation of Novo Nordisk's shares cannot be implemented, as this would require a change to the Articles of Association of the Novo Nordisk Foundation with the consent of the Danish foundation authorities.

Novo Nordisk publishes, in full, information regarding its share-based incentive programmes for members of the Executive Committee. For the Executive Committee and the Board of Directors, each defined as a group, Novo Nordisk discloses infor-

#### GROWTH HORMONE THERAPY

### Continued roll-out of Norditropin® SimpleXx®

Sales of human growth hormone products rose by 3% to DKK 2,164 million. Sales in Europe have been driving the growth through the continued roll-out of Norditropin® SimpleXx®, our liquid recombinant growth hormone product. Sales in the US also contributed to the growth following the launch of Norditropin® SimpleXx® in the first quarter of 2001. Our market share in the industrialised world is 13.2%.

Sales in Japan were negatively impacted by inventory adjustments at wholesalers. In addition, the depreciation of the JPY compared to the first 9 months of 2000 has influenced reported sales negatively measured in DKK.

The registration file has been submitted in the EU for growth hormone treatment of infants who are born small for their gestational age due to growth retardation during pregnancy (SGA/IUGR), and who remain shorter than average around the age of two (see page 21). New indications are being explored where the anabolic effect of human growth hormone is expected to change pathologic catabolic conditions and improve healing of tissue.

#### HORMONE REPLACEMENT THERAPY

### Approval of Novofem™

To strengthen the focus on hormone replacement therapy (HRT), we have moved management of the global business to our affiliate in the largest HRT market, Germany.

Activelle® a low-dose continuous combined HRT, has been launched in France, South Africa and Brazil. Activelle® has also entered a Phase 3b study with results showing a bleeding pattern during Activelle® treatment significantly better than sequential treatment, especially in late perimenopausal women.

Novofem™, the new low-dose sequential HRT, was approved in almost all EU countries plus Norway and Iceland in October 2001 and will be launched across Europe in 2002.

In the US, our partner Pharmacia Corporation, has launched Activelle® (Activella® in the US) and Vagifem®.

HRT sales in 2001 were DKK 1,435 million with growth of 10% compared to the previous year. Novo Nordisk's HRT market share in Europe is 13.4%.

#### LEGAL NOTICE

### Forward-looking statement

This *Annual Review* contains forward-looking statements as the term is defined in the US Private Securities Litigation Reform Act of 1995. Forward-looking statements provide current expectations or forecasts of events such as new product introductions, product approvals and financial performance.

Such forward-looking statements are subject to risks, uncertainties and inaccurate assumptions. This may cause actual results to differ materially from expectations. Factors that may affect future results include interest rate and currency exchange rate fluctuations, delay or failure of development projects, production problems, unexpected contract breaches or terminations, government-mandated or market-driven price decreases for Novo Nordisk's products, introduction of competing products, Novo Nordisk's ability to successfully market both new and existing products, exposure to product liability and other lawsuits, changes in reimbursement rules and governmental laws and related interpretation thereof, unexpected growth in costs and expenses.

Risks and uncertainties are further described in reports filed by Novo Nordisk with the US Securities and Exchange Commission (SEC) including the company's Form 20-F, which was filed on 27 April 2001. Please also refer to the section 'Financial risk factors' in the *Annual Financial Report*, and to the company's Form 20-F, which will be filed no later than June 2002.

Novo Nordisk is under no duty to update any of the forward-looking statements after the date of this *Annual Review* or to conform such statements to actual results, unless required by law.

mation about holding of shares. Novo Nordisk has for 2001, however, decided not to disclose information about members' individual holding of shares in the company.

**HOLDING OF OWN SHARES AND REDUCTION IN SHARE CAPITAL** As of 31 December 2001, Novo Nordisk's holding of its own shares (treasury shares) was 8,017,323 B shares, representing 2% of the total share capital. As of 7 February 2002, Novo Nordisk's holding of its own shares was 8,017,323 B shares. The total number of shares repurchased during 2001 was 87,500 B shares. A total of 1,127,337 B shares were sold as part of existing incentive programmes to management and the employee share programme during 2001.

In order to maintain capital structure flexibility, it was decided at the Annual General Meeting in March 2001 to reduce the B share capital by cancellation of nominally DKK 45 million of own B shares, which corresponds to approximately 6% of the total share capital.

**EMPLOYEE SHARE PROGRAMMES** In May 2001 the Board of Directors decided to implement a global share programme for the employees in Novo Nordisk A/S and its affiliates. Each employee was offered the possibility to buy up to 100 B shares at DKK 100 per share. In Denmark the programme has been executed in November 2001 and 991,591 B shares were sold to the employees. Outside of Denmark the shares will be offered to the employees in the first quarter of 2002.

**DIVIDEND POLICY AND SHARE PERFORMANCE** At the Annual General Meeting on 12 March 2002, the Board of Directors will propose a dividend for 2001 of DKK 3.35 per share of DKK 2, up from DKK 2.65 per share in 2000, corresponding to an increase in dividend paid of 26%. No dividend will be paid on the company's holding of own shares.

During 2001 Novo Nordisk B shares listed on the Copenhagen Stock Exchange were up 20%, whereas the ADRs listed in New York were up 13%.

**LONG-TERM FINANCIAL TARGETS** We maintain the long-term financial targets we established last year, which we believe reflect competitive financial performance in our industry in the coming years. The targets are:

- Operating profit (EBIT) growth of 15% per annum.
- Operating margin (EBIT margin) of 25%.
- Return on invested capital (ROIC) of 25% per annum.
- Cash to earnings ratio of 60% as a 3 year average.

**OUTLOOK FOR THE YEAR 2002** The roll-out of products like NovoRapid®, NovoLog®, NovoMix®, InnoLet®, InDuo®, FlexPen® and Norditropin® SimpleXx® underpins Novo Nordisk's expectations of a positive sales development in 2002.

Assuming that currency exchange rates remain at the current level for the rest of the year we expect to meet the long-term financial target of growth in operating profit of 15% in 2002. This expectation includes income of approximately DKK 240 million related to the accounting effect for Novo Nordisk of the initial public offering of ZymoGenetics. The expectation for operating profit growth excludes potential income related to the planned out-licensing of NN622 currently in Phase 3 clinical development.

The operating profit expectation for 2002, adjusted for one-off items in 2001 like the patent settlement with Aventis and the payment from Novartis on NN622 and in 2002 for income related to the initial public offering of ZymoGenetics, corre-

sponds to an expected growth of operating profit in the underlying business of more than 15%.

The largest part of the increase in operating profit for 2002 is expected to be realised in the second half of the year, primarily due to new product launches and the continued introduction of existing products in new geographical markets.

The major part of Novo Nordisk's sales is in currencies other than DKK, whereas a significant part of costs is in DKK. Thus, exchange rate fluctuations may have a significant impact on operating profit. All other things being equal, a 5% movement in JPY, USD and GBP rates is estimated to have an annual impact on operating profit of DKK 140 million, DKK 110 million and DKK 50 million, respectively. Depreciation and amortisation for 2002 are expected to be realised at the level of DKK 1.3 billion compared to DKK 1.1 billion in 2001.

To offset the exposure from foreign currency exchange rate variations on operating profit Novo Nordisk hedges its exposure in major currencies using forward exchange contracts and options. At the end of 2001 Novo Nordisk had hedged the future cash flow related to both USD and GBP 9 months ahead and JPY 14 months ahead. At the current level of exchange rates this is expected to lead to a gain on foreign exchange hedging of around DKK 100 million in 2002. Combined with positive net interest income and assuming that the current interest rates and exchange rates remain unchanged for the rest of 2002, the company expects net financial income of approximately DKK 150 million for the year.

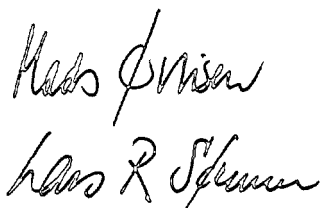
For 2002 Novo Nordisk expects the tax rate to be 35%, 1 percentage point lower than the tax rate in 2001.

Novo Nordisk expects to invest DKK 4.5 billion in new facilities in 2002. As previously announced, the investment level will also in 2003 remain elevated, but is not expected to exceed the 2002 net investments. The investment in additional production capacity will enable Novo Nordisk to pursue significant opportunities within the core therapy areas: diabetes care and haemostasis management.

**EMPLOYEES** It is fashionable these days for companies to talk about valuing their 'intellectual capital' or 'human assets', but for us, this simply means that we place tremendous value on the skills, commitment and enthusiasm that people working at Novo Nordisk bring to their jobs.

The number of employees in Novo Nordisk increased by 17% during 2001 to 16,141. This was primarily due to the ongoing expansions in our Product Supply organisation, with the purpose of increasing production output and establishing a workforce for our new factories. In addition we enlarged our international sales organisation, especially in the US where we have expanded our sales force to approximately 600 employees during the year.

We would like to thank everyone within Novo Nordisk and our shareholders for their commitment and support during 2001.



7 February 2002

Mads Øvlisen, chairman of the Board of Directors  
Lars Rebien Sørensen, president & CEO

# Financial highlights

	1997	1998	1999	2000	2001	Change	2000	2001
Key figures	DKK million	DKK million	DKK million	DKK million	DKK million	2000-2001	EUR million	EUR million
Diabetes care	8,889	9,818	11,777	14,578	<b>16,624</b>	14.0%	1,961	2,237
Haemostasis management (NovoSeven®)	369	576	1,313	2,270	<b>3,096</b>	36.4%	305	416
Growth hormone therapy	1,569	1,498	1,721	2,107	<b>2,164</b>	2.7%	283	291
Hormone replacement therapy	1,012	1,094	1,130	1,306	<b>1,435</b>	9.9%	176	193
Other	746	661	482	550	<b>457</b>	(16.9%)	74	61
Net turnover	12,585	13,647	16,423	20,811	<b>23,776</b>	14.2%	2,799	3,198
Operating profit (EBIT)	2,440	2,933	3,527	4,816	<b>5,614</b>	16.6%	648	755
Net financials	385	243	(178)	24	<b>416</b>	–	3	56
Profit before taxation	2,825	3,176	3,349	4,840	<b>6,030</b>	24.6%	651	811
Net profit	1,772	2,016	2,001	3,087	<b>3,865</b>	25.2%	415	520
Shareholders' funds	16,304	15,776	15,876	16,981	<b>20,137</b>	18.6%	2,284	2,708
Total assets	22,515	22,085	23,082	24,920	<b>28,905</b>	16.0%	3,351	3,887
Capital expenditure (net)	1,825	1,648	1,265	2,141	<b>3,846</b>	79.6%	288	517
Free cash flow	596	706	1,533	2,712	<b>186</b>	(93.1%)	365	25

	1997	1998	1999	2000	2001	Change	2000	2001
Per share/ADR of DKK 2	DKK	DKK	DKK	DKK	DKK	2000-2001	EUR	EUR
Earnings per share	4.76	5.43	5.60	8.84	<b>11.18</b>	26.4%	1.19	1.50
Earnings per share diluted	4.76	5.43	5.59	8.82	<b>11.10</b>	25.9%	1.19	1.49
Proposed dividend	1.15	1.55	1.95	2.65	<b>3.35</b>	26.4%	0.36	0.45
Quoted price at year-end for B shares	178	153	178	285	<b>342</b>	20.0%	38.33	45.99

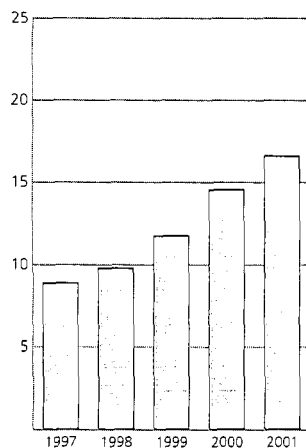
Ratios	1997	1998	1999	2000	2001	Long-term financial targets
Growth in operating profit (EBIT)	N/A	20.2%	20.3%	36.5%	<b>16.6%</b>	15%
Operating profit margin	19.4%	21.5%	21.5%	23.1%	<b>23.6%</b>	25%
Return on invested capital (ROIC)	12.6%	14.4%	15.3%	22.0%	<b>23.1%</b>	25%
Cash to earnings	33.6%	35.0%	76.6%	87.9%	<b>4.8%</b>	
Cash to earnings, 3 year average	N/A	N/A	48.4%	66.5%	<b>56.4%</b>	60%
Net profit margin	14.1%	14.8%	12.2%	14.8%	<b>16.3%</b>	
Return on shareholders' funds	11.5%	12.6%	12.6%	18.8%	<b>20.8%</b>	
Equity ratio	72.4%	71.4%	68.8%	68.1%	<b>69.7%</b>	
Change in market capitalisation	79.9%	(16.5%)	13.7%	56.2%	<b>20.4%</b>	

The Group accounting policies have been changed in 2001 in accordance with the new Danish Company Accounts Act of 2001 and figures for 1997-2000 have been restated, see the *Annual Financial Report* for further information on the changes.  
 Figures for 1997-1999 are derived from the consolidated accounts of the former Novo Nordisk Group (prior to the demerger) – all dividends are allocated to the continuing Novo Nordisk.  
 Key figures and per share data are translated into EUR as supplementary information – the translation is based on the currency rate at 31 December 2001 (EUR 1=DKK 7.4357).  
 Quoted prices for 1997-2000 are adjusted for the change in trading units for B shares from DKK 10 to DKK 2 and B shares/ADRs from 1:2 to 1:1.

Development in turnover	1997	1998	1999	2000	2001
Net turnover (in DKK million)	12,585	13,647	16,423	20,811	<b>23,776</b>
Prices and volume/mix	9%	11%	15%	16%	<b>17%</b>
Currency	4%	(3%)	5%	11%	<b>(3%)</b>
Total growth	13%	8%	20%	27%	<b>14%</b>

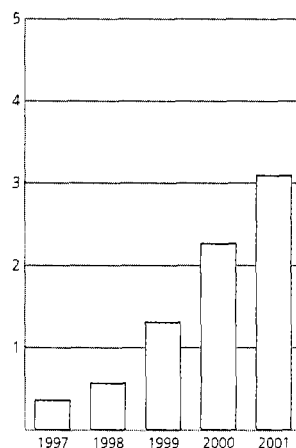
Diabetes care  
net turnover

DKK billion



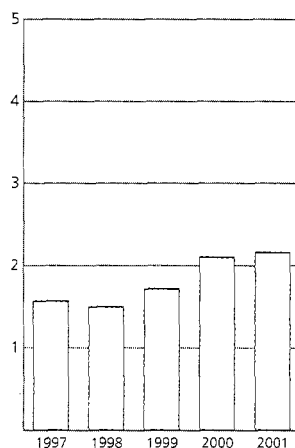
Haemostasis management  
(NovoSeven®) net turnover

DKK billion



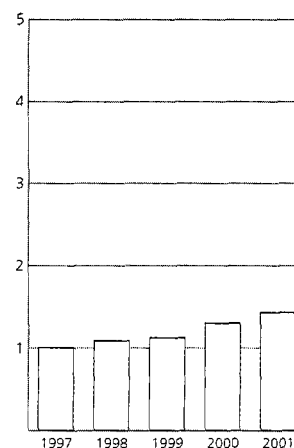
Growth hormone therapy  
net turnover

DKK billion



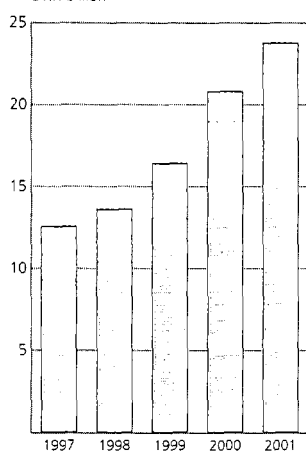
Hormone replacement therapy  
net turnover

DKK billion



Therapy areas  
net turnover

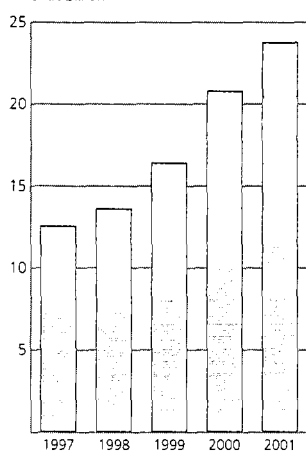
DKK billion



Diabetes care  
Haemostasis management  
(NovoSeven®)  
Growth hormone therapy  
Hormone replacement therapy  
Other

Geographical areas  
net turnover

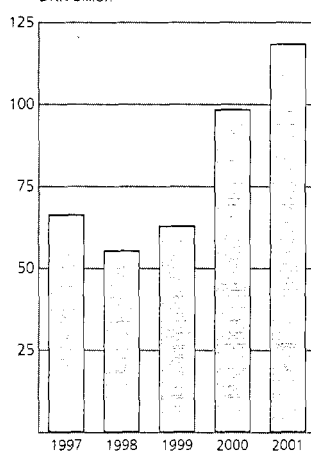
DKK billion



Europe  
US  
Japan  
Rest of the World

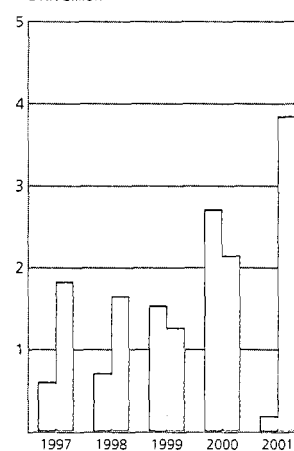
Market capitalisation

DKK billion



Free cash flow and  
capital expenditure (net)

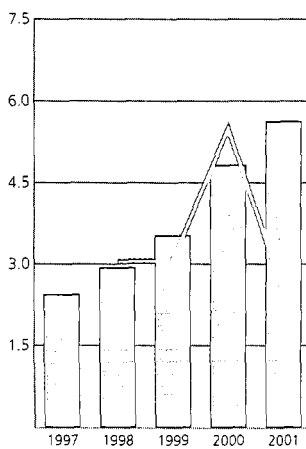
DKK billion



Free cash flow  
Capital expenditure (net)

Operating profit and  
growth in operating profit

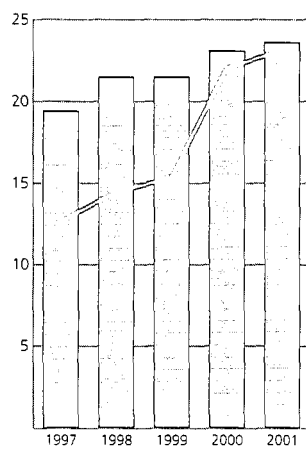
DKK billion



Operating profit  
Growth in operating profit

Operating profit margin and  
return on invested capital (ROIC)

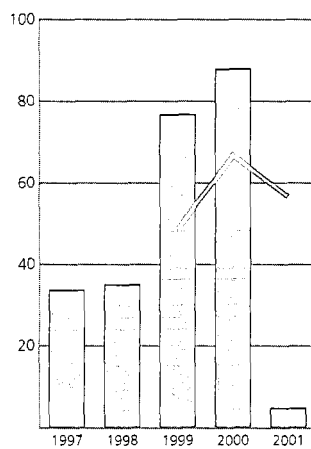
%



Operating profit margin  
ROIC

Cash to earnings and  
3 year average

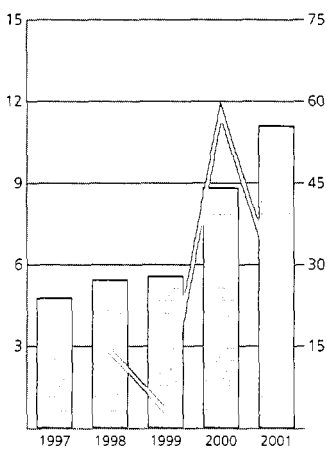
%



Cash to earnings  
Cash to earnings, 3 year average

Earnings per share (EPS) diluted  
and growth in EPS diluted

DKK



Earnings per share diluted  
Growth in EPS diluted

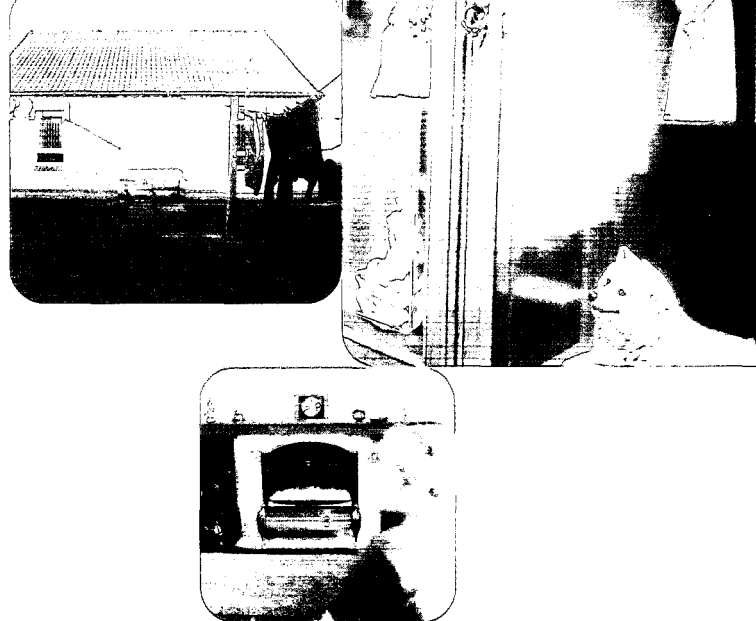


Mary Reid with her sister Amelia Bruce (who both have Type 1 diabetes), Scotland.

I wasn't surprised when I found out I had diabetes because my sister had it before me. Mary found out when she was 13 and I found out when I was 15. We have both got medals from the British Diabetic Association for being on insulin for 50 years!

When we were young Mary and I would travel to the clinic, which would take the whole day. The doctor would tell us to take care of our feet and to keep to our diets. Along with our needles, they gave us a little scale and told us to weigh our potatoes. I still have my first glass-and-metal syringe. Can you believe that?

Mary's son and granddaughter have diabetes. My grandmother died when she was in her thirties, so maybe she died of diabetes. Despite everything, I try and keep the same humour about me no matter what happens. As long as my family keeps well, I'm happy.



## Leadership in insulin delivery devices

Novo Nordisk's aspiration to be the world's leading diabetes care company requires a commitment to take the patient's cause personally and develop new treatment solutions that recognise the lifestyle and individual needs of people with diabetes.

Diabetes affects all kinds of people at all ages, and they require different kinds of treatment to manage and control their disease. A child has different needs than its mother, who also has different needs than her husband, or grandparents. Novo Nordisk's commitment is to find the best treatment solutions that recognise the individual needs of people with diabetes.

One of the most critical requirements for a person to manage his or her diabetes is sticking to the therapy programme. "If you can make treatment more convenient, it helps a lot," says Jos Verest, head of Novo Nordisk's Diabetes Life Cycle Management group. The group's job is to work with people with diabetes and healthcare professionals to raise awareness about improved treatment methods. "When people with diabetes experience insulin treatment for the first time, they find that the treatment is virtually painless. They feel better and they come to manage their disease more effectively. They can lead a more normal life."

The administration of insulin originally consisted of a vial and syringe, much like a stinging shot of vaccine at the doctor's office. But today an entirely new range of insulin delivery devices and needles allows far greater comfort, convenience and discretion.

**INSULIN PENS** Novo Nordisk is a pioneer in insulin 'pen' delivery systems, beginning with NovoPen®, in 1985. The user could just push a button to activate a virtually painless dose of insulin with a super-thin needle. Today, the current version, NovoPen® 3, is the most widely used insulin pen in the world.

PenMate®, an accessory to NovoPen®, hides the needle so people with needle phobia lose virtually all sensation of getting an injection.

Injection devices now come in prefilled and durable varieties. Prefilled pens like NovoLet®, InnoLet® and FlexPen® are made for ease of use, and are discarded when empty, usually after 1 or 2 weeks.

Durable pens, like the NovoPen® series, contain an insulin cartridge that is replaced for every 300 units used, just like a cartridge for a fountain pen. The insulin cartridge lasts for 1 week for most people with diabetes, but up to 2 weeks for people on low insulin doses. Durable pens come in a variety of colours to suit individual tastes, whatever the age of the user. NovoPen® Junior, for example, was specially developed for children and teenagers. It features easy and precise dosing, a rugged design, and a choice of bright colours and patterns. Refillable devices, such as Innovo®, allow Novo Nordisk to use advances in technology to include electronics for recording dosages.

### FOR PEOPLE WHO ARE PHYSICALLY CHALLENGED

Among the older population, Type 2 diabetes is a growing problem, and insulin users with poor eyesight and reduced dexterity can find the injection process difficult. InnoLet® is a prefilled insulin device that helps remove this obstacle. Its shape resembles a kitchen timer with a large grip, easy to read insulin unit scale and large injection button making it easy to hold and



→ inject. Novo Nordisk developed InnoLet® in collaboration with the Spanish and Danish associations for the blind and visually impaired.

InnoLet® is a delivery system that is "easy to use...(with) the possibility to hear a click sound when counting units" wrote Oliver del Carmen of ONCE, the Spanish National Organisation of the Blind. "It is very useful for the elderly because it can be held easily in their hands."

**FOR PEOPLE WHO WANT CONVENIENCE** People who use insulin and want to maintain an active lifestyle need a device that's fast and easy to use, accurate and discreet. Novo Nordisk developed FlexPen® for this group, in addition to those just beginning to use insulin. And it will probably become a pen of choice for other people, too.

NovoMix® 30 FlexPen®, which is set for launch in 2002, combines this device with a dual-release insulin analogue. (For more on insulin analogues, see page 26.) Dual release means 30% of this analogue is rapid-acting insulin and 70% is protaminated intermediate-acting insulin. "We're giving people with diabetes an innovative device with a novel insulin analogue. It simplifies

insulin dosing because FlexPen® has only a few, simple steps to follow," says Svend Elk, international marketing manager at Novo Nordisk.

**FOR THE ACTIVE** A high-tech device for people on the go is InnoLet®, an electronic injection system with a built-in memory that helps users keep track of their previous insulin doses – both the time elapsed since the last injection and the insulin dose delivered. Charlotte Østerlund, international marketing manager at Novo Nordisk, explains: "A common complaint is, 'I was getting ready to take my insulin when the telephone rang. When I hung up, I couldn't remember if I had taken my dose or not.' InnoLet® tells them when they last injected, and how much insulin they took."

**MATCHING DEMAND AND TECHNOLOGY** New standards of diabetes management and care can be set through technological partnerships. InDuo®, developed jointly by Novo Nordisk and LifeScan, sparked instant recognition when it was introduced in June 2001 as the world's first combined insulin delivery device and blood glucose monitor.



#### INFOLINE

### Raising diabetes awareness in India

In 2001, the Novo Nordisk affiliate in Bangalore, India, launched the Diabetes Infoline, a call centre aimed at providing information on diabetes and practical advice on managing it to people with diabetes and their family. It raises awareness about the disease in a country where the vast majority of people with diabetes are not diagnosed, let alone treated.

Specially-trained nurses and dieticians take the calls 12 hours a day, 7 days a week. They answer frequently-asked questions and provide qualified information on diet and nutrition, and the options for diabetes care that Bangalore has to offer.

The Infoline serves as a model for other major cities in India.

#### ONLINE INFORMATION

### Internet services for people with diabetes

The Internet has opened new possibilities for sharing healthcare information.

NovoTrack™ is a diabetes self-care programme launched in 2001 that offers a person with diabetes personalised education and support online. NovoTrack™ is available from [www.diabetescommunity-us.com](http://www.diabetescommunity-us.com).

Novo Nordisk has also launched [www.insulinpen.com](http://www.insulinpen.com) to offer people with diabetes a single port of entry to all devices in the company's diabetes portfolio. It has features such as an interactive QuickGuide, where devices can be tried online. Device inserts and stories from people with diabetes are also available.

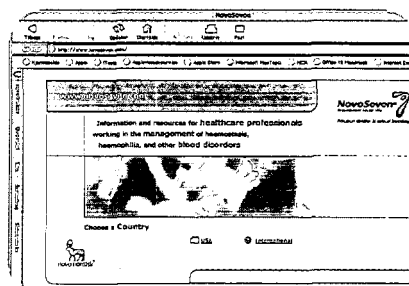
In 2001 Novo Nordisk launched diabetes community websites in 17 countries for people with diabetes. The sites include research news, a cookbook, personal diary, diabetes quiz and chat room. Links to sites can be found at [www.insulinpen.com](http://www.insulinpen.com).

A monthly e-mail magazine from Novo Nordisk for people with Type 2 diabetes includes information on food and nutrition, medical research and much, much more. Launched in 2001 in Denmark, it's available at [www.d2magazine.com](http://www.d2magazine.com).

#### INTERACTIVE EDUCATION

### Internet services for healthcare professionals

For diabetes specialists, doctors and nurses [www.d4pro.com](http://www.d4pro.com) gives up-to-date information about developments within clinical practice and research, educational support and web links to diabetes journals and organisations. They can also find Novo Nordisk's products online at [www.novoproduct.com](http://www.novoproduct.com). For haemostasis management, professionals can visit [www.novoseven.com](http://www.novoseven.com).



In size and shape, InDuo® is similar to a modern cell phone, developed with the younger, more active person in mind. *Diabetes Positive* magazine in the US called it "a marvel of technology. Both parts of the system are first class". Another collaborative, potential breakthrough, currently in development, is AERx® insulin Diabetes Management System (iDMS), an electronic pulmonary insulin system that delivers insulin by inhalation rather than by injection. Novo Nordisk and Aradigm Corporation, a specialist in pulmonary drug delivery systems, are jointly developing this novel system.

Whereas conventional asthma medicine inhalers deliver varying doses of active substance, depending on actual breathing patterns, AERx®iDMS in contrast has an electronic breath control mechanism that monitors and guides the user to ensure a correct dose of active substance is delivered. The system reduces the risk of hyper- and hypoglycaemia, which can be caused by too little or too much insulin, respectively. And, unlike other systems under development, AERx®iDMS allows delivery of single-unit increments, just like a pen injection device. AERx®iDMS has been developed to overcome the insulin treatment barrier for people who have a psychological resistance to insulin injections.

#### PROTEIN DELIVERY SYSTEMS

### Innovative insulin delivery

Novo Nordisk has committed itself to leadership in protein drug delivery. One primary research area is Protein Delivery Systems (PDS), and a new unit in the company's research and development organisation has been set up to develop innovative methods of administering insulin and other therapeutic proteins.

In practical terms, PDS combines Novo Nordisk's existing expertise in diabetes protein formulation and insulin injection systems, for developing convenient and fully-integrated protein delivery systems for patients in several therapeutic areas. The unit focuses on injection devices, advanced continuous infusion systems and glucose measurement systems.

#### ORAL TREATMENT

### Effective control of diabetes

Effective control of diabetes requires effective control of three blood glucose parameters: fasting blood glucose, post-prandial (after-meal) blood glucose and a factor called HbA1c, which is used to determine the average blood sugar level over a minimum of 3 months. NovoNorm® offers control of all three parameters.

Recent epidemiological evidence suggests that to minimise the risk of cardiovascular complications, it's important to treat the abnormally high post-prandial blood glucose levels present in Type 2 diabetes. NovoNorm® does just that.

Novo Nordisk launched NovoNorm® (named Prandin® in the US, and GlucoNorm® in Canada) in 1998 as the first in a new class of oral antidiabetic drugs for Type 2 diabetes, as it's a highly potent, fast-acting agent that's absorbed rapidly after dosing and cleared quickly from the bloodstream. This enables NovoNorm® to significantly reduce the risk of severe hypoglycaemia.

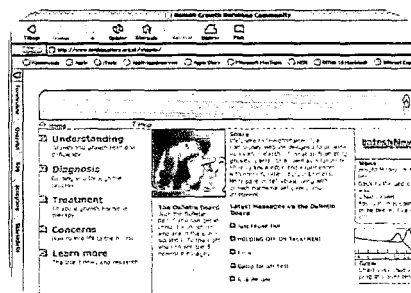
With its unique, meal-related dosing concept, NovoNorm® is a significant therapeutic step forward. Post-marketing surveillance studies have even shown it to reduce weight.

**TRANSFERRING GOOD IDEAS** Some of the best ideas and related technology from Novo Nordisk's diabetes care activities have also proved valuable in other therapeutic areas, such as growth hormone therapy. Patients with growth disorders are typically children, who need regular treatment with human growth hormone by injection. The NordiPen® and NordiPenMate® deliver the soluble growth hormone product, Norditropin® SimpleXx® with the same painless ease as their diabetes cousins, NovoPen® and PenMate™.

Leadership in drug delivery devices is an expression of Novo Nordisk's commitment to healthcare. The company's research and development organisation recently established a Protein Delivery Systems unit to strengthen its innovation in the delivery of insulin and other therapeutic proteins (see article below).

Because people are different, Novo Nordisk continues to discover and develop therapies that meet the needs of individual lifestyles.

For more information about Novo Nordisk's diabetes injection devices, visit [www.insulinpen.com](http://www.insulinpen.com).



[WWW.HEIGHTMATTERS.COM](http://WWW.HEIGHTMATTERS.COM)

### Community for growth hormone deficiency

In 2001, Novo Nordisk launched [www.heightmatters.com](http://www.heightmatters.com) together with the Child Growth Foundation (CGF) of the UK. It's a website for parents of children with growth hormone deficiency and the healthcare professionals who treat them.

The site provides a forum for sharing knowledge and experiences with other families and with professionals around the world. It's the result of in-depth interviews with specialist doctors and nurses, child psychologists, and patients and their parents, all of whom deal with growth hormone deficiency on a daily basis.

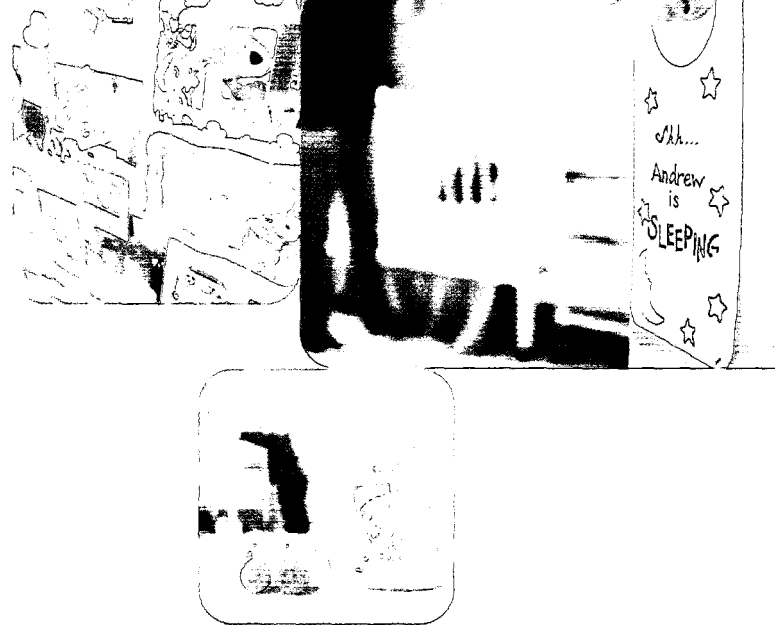
As a meeting place, [www.heightmatters.com](http://www.heightmatters.com) welcomes all perspectives. Both the traffic and number of site pages have grown steadily since launch. Novo Nordisk launched heightmatters™ in Sweden and Denmark in November 2001.



Andrew Scott (who has haemophilia A) with his father Richard, New Zealand.

When Andrew was born he was very pale and had a bruise on his face, so the doctor did a blood count and coagulation test. We remember when they told us our wonderful new baby had haemophilia. At this time we just wanted to know what this meant for his future, for example if he would be able to ride a bike.

When Andrew was 4 months old he developed inhibitors to his treatment. This was a huge blow as it meant the medicine didn't work anymore. But Andrew was able to start on NovoSeven®. With this treatment, once the hospital has controlled the bleed, we can go home and treat him ourselves. Being at home is much better than being in hospital, even if it means getting up at night to treat him.



## Is NovoSeven® a miracle drug?

The joy of life lies in the freedom to live it. For a baby's parents in New Zealand, it's having the confidence to continue to live their lives. For a mother in the US, it's being able to get back to the dishes instead of driving 85 miles to treat her infant son for a rare type of haemophilia.

NovoSeven® (Factor VIIa) from Novo Nordisk was launched in 1996 as a niche product for an extraordinary type of haemophilia in which the patient's body develops 'inhibitors' or antibodies and so rejects standard treatment. There are about 3,500 such inhibitor patients worldwide.

Today, NovoSeven® is a candidate for becoming the world's first general haemostatic agent. Some doctors have even used "miracle drug" in describing Factor VIIa's effect in a broad range of bleeding conditions.

Technically, NovoSeven® is activated recombinant coagulation factor VII, expressed as rFVIIa or Factor VIIa. It was developed by Novo Nordisk through the research of Professor Ulla Hedner, and approved in Europe in March 1996, the US in 1999 and Japan in 2000.

As a recombinant product with no content of human plasma, NovoSeven® eliminates the risk of contamination from viruses such as hepatitis or HIV. It acts locally at the site of injury, reducing the risk of thrombotic side effects as it binds to a receptor in the damaged vessel wall. This ensures the activation of blood platelets at the site of injury to form a stable plug in the wound.

**FREEDOM OF TREATMENT** NovoSeven® has shown to be a life-saving product without any age restrictions to its use. It has successfully been used in infants as young as 10 days old in clinical trials. The recommended dose is based on body weight, and

is administered by injection every 2 hours or so until a bleeding episode is stopped.

"Inhibitor patients used to be confined to hospitals and treatment centres, but now, with NovoSeven® they can be treated, or treat themselves, at home," says Michael Shalmi, head of Biopharmaceuticals Marketing at Novo Nordisk.

Although few doctors have known precisely how Factor VIIa works, in recent years they have been using it increasingly for investigative purposes in operating rooms, as a last resort to save patients from bleeding to death. They have reported a remarkable number of promising uses on patients with no underlying clotting disorders, such as in surgery and spontaneous bleeding from trauma wounds.

Factor VIIa may make a difference for patients by giving them a higher chance of survival, fewer days in the hospital and fewer infections. It could have the potential to give physicians better control of bleedings, with fewer complications and less dependency on blood banks. For those who pay the healthcare bill, NovoSeven® may mean reduced intensive care unit and general ward days, higher recovery rates and fewer blood transfusions.

**A UNIVERSAL AGENT?** For a mother in Israel, the joy of life is having her son at all, after he nearly bled to death from a gunshot wound. He did not have haemophilia, but surgeons resorted to Factor VIIa when all other forms of treatment failed. →

→ Novo Nordisk is now conducting clinical trials to determine what role NovoSeven® can play in a wide range of blood disorders and bleeding situations, including many therapeutic applications covering coagulation factor deficiencies, blood platelet disorders and general haemostasis (stopping of bleeding).

Coagulation factor deficiencies include the relatively small group of haemophilia patients NovoSeven® was originally developed for. However, this segment also includes some large patient groups with liver disease and related coagulation system deficiencies. One such group is people with liver damage from hepatitis C, and another is people with liver damage from alcoholism. Yet another group is elderly people being treated with oral anti-coagulation medicine to prevent strokes. This exposes them to spontaneous and often serious bleeding episodes because their own coagulation system is rendered inoperative.

Blood platelet disorders mean that patients either have very few platelets in their blood or defects in the platelets themselves.

Platelets rush to the scene of a wound to form a plug in the ruptured blood vessel. Some cancer patients lose their original blood platelets due to chemotherapy in connection with stem cell transplantation, such as in bone marrow transplants. These patients are highly susceptible to bleeding as their own blood has been 'subdued' and they're waiting to develop new platelets.

The third area, general haemostasis, involves the stopping of bleeding in patients with no underlying clotting disorders: This could be in surgery for liver cancer, for instance, in deep brain haemorrhaging, or in acute bleeding due to traffic accidents, bullet wounds or lacerations.

A review of these additional applications resulted in the selection of a number of clinical trials, covering:

- Liver transplantations.
- Liver resections.
- Liver resections in chronic liver disease.

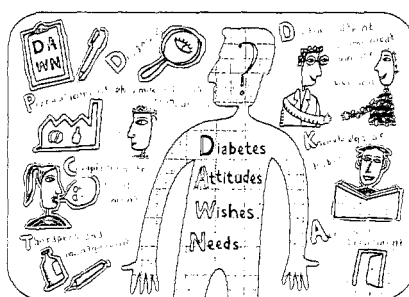
#### INTERNATIONAL STUDY

### The DAWN of better understanding

The psychosocial dimensions of diabetes are critically important for the outcome of the disease, yet such issues have often been neglected in the past. DAWN is an international study sponsored by Novo Nordisk that highlights the need to reassess patient self-management. It stands for Diabetes Attitudes, Wishes and Needs, and was conducted over 2 years among thousands of healthcare professionals, policy-makers, people with diabetes and their families, in 13 different countries.

A scientific advisory panel chaired by Professor Sir George Alberti, president of the Royal College of Physicians (UK) and president of the International Diabetes Federation has supported the entire DAWN project. The panel includes physicians, educators and people with diabetes.

The study identifies issues that can lead to earlier diagnosis of diabetes, along with better compliance by people with diabetes to the treatments and changes in lifestyle that are necessary for their survival. It gives a better understanding of the individuals' own perceptions of their disease, and provides new insight into care-providers' and policy-makers' attitudes and responsibilities for treating the disease. It may also have uncovered issues that no one was aware of that have an impact on people with diabetes and their families.



"Diabetes is not an illness that you can go and have an operation for and then get better," said a nurse interviewed in the DAWN study in the US. "This is a life-long chronic state that you are going to be dealing with forever."

Results of the DAWN study are now being discussed and evaluated in the diabetes professional community. These results have confirmed some assumptions but also revealed new facts. For example, DAWN shows that people with diabetes often think that their doctors are too busy, or don't know enough about diabetes, and don't always refer them to specialists when they should.

DAWN findings also show a need for more psychological training of physicians and clinicians in order to understand the feelings that motivate people with diabetes to comply with treatment.

The DAWN study is the most significant investment into the social and psychological impacts of diabetes that Novo Nordisk, or any other company, has ever made. For more information, visit the DAWN website at [www.dawnstudy.com](http://www.dawnstudy.com)

#### NEEDLE PHOBIA

### Overcoming the insulin barrier

Many severe complications from diabetes can be avoided if insulin therapy is begun as early as possible. But many people hesitate, and the number-one reason is fear of the needle.

It affects people with diabetes and doctors alike. A person may be afraid of the thought of giving himself or herself an injection. Will they look like a drug addict? Is insulin the last resort? The doctor, on the other hand, may be aware of the person's anxiety and put off the decision to start insulin. They may deem it too complicated for the person and perhaps for himself or herself, as well.

Researchers have tried many routes to overcoming the fear of injection. This had led to the development of injection devices that provide precise dosing, ease of use and short, super-thin needles that all but eliminate the sensation.

The only likely, practical and effective alternative to injection so far could be pulmonary insulin delivery – inhaled through the lungs – which is in development but not yet on the market. Novo Nordisk and Aradigm Corporation are jointly developing an electronic pulmonary insulin system called AERx®iDMS (NN1998). It could be a significant step toward reducing diabetes complications by overcoming the fear of injection.

- ⊙ Upper gastro-intestinal bleeds.
- ⊙ Central nervous system bleeds.
- ⊙ Bleedings caused by anticoagulation therapy.
- ⊙ Stem cell transplantations.
- ⊙ Trauma.

A number of these clinical Phase 2 studies are now being conducted in parallel in Asia, Europe and the US. In each, Factor VIIa is being tested on about 200 patients to find out how it works in relation to the bleeding condition in question. Documentation of the drug's efficacy and safety is expected to document the treatment areas and disorders where Factor VIIa can make a difference.

**EXCEEDING EXPECTATIONS** From being a unique drug for a rare disorder, Factor VIIa may have a future for the treatment of millions of people worldwide. It's an unusual success story that is unfolding in a market that hasn't seen any pharmacologi-

cal breakthroughs in the treatment of haemophilia patients with inhibitors for at least 30 years.

"The fact that someone was able to not only determine what Factor VIIa does... send it to me to give to my child, and that this tiny infusion stops his bleeding and suffering... to me, this is a miracle," Joyce Hewitt, the mother of a child who has haemophilia with inhibitors, from the US, told a NovoSeven® symposium in November 2001. "There have been many things I have learned in the last 5½ years, but I think one of the biggest has to be to take time and enjoy life."

For more information about NovoSeven®, visit the website at [www.novoseven.com](http://www.novoseven.com).

#### EDUCATION FOR CHILDREN

### Fun and learning at diabetes summer camps

Children with diabetes in Hungary can learn about their disease while they have fun in the great outdoors at diabetes summer camps around the country. The Novo Nordisk affiliate in Budapest is the biggest commercial sponsor of the camps, which are run in collaboration with the Hungarian Diabetes Association and some other private companies.

Novo Nordisk donates money, insulin devices, educational resources and gifts. There are typically 10–15 camps a year, lasting 1–2 weeks and involving about 30 kids each. The children enjoy nature and all the activities associated with a camp, and at the same time they learn about their diabetes and how to manage it.



#### HORMONE DEFICIENCY

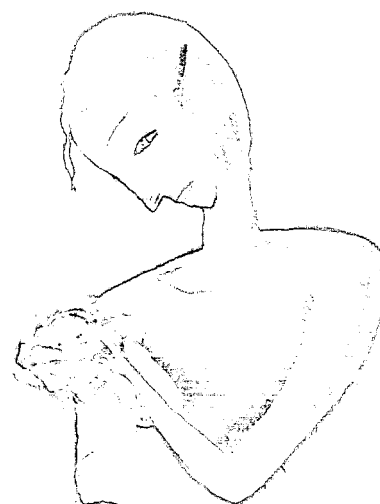
### Lower doses in hormone replacement therapy

Novo Nordisk is leading a trend toward lower doses in hormone replacement therapy (HRT). HRT counteracts hormone deficiency, relieving symptoms connected with menopause and at the same time preventing osteoporosis.

Novo Nordisk has set the goal of developing a unique, low-dose offering of HRT products that balance minimum effective dose and optimal efficacy.

Novo Nordisk was, with Kliogest®, the first to offer the continuous, combined regimes of oestrogen and progesterone for post-menopausal women. Now it's the first to introduce low-dose combination therapy that reduces the oestrogen dose by half, to 1 milligram, with Actiwell® for women after the menopause. It prevents withdrawal bleeding, reduces irregular bleeding and is especially effective against osteoporosis.

Novofem™ is a low-dose, sequential combined oral therapy for women who require symptom relief and regular cycle control. The sequence of hormones in a daily pill follows the 28-day menstrual cycle to stabilise it, along with providing relief of symptoms and protection against osteoporosis.



#### GESTATIONAL GROWTH DISORDER

### Growth hormone effective in SGA

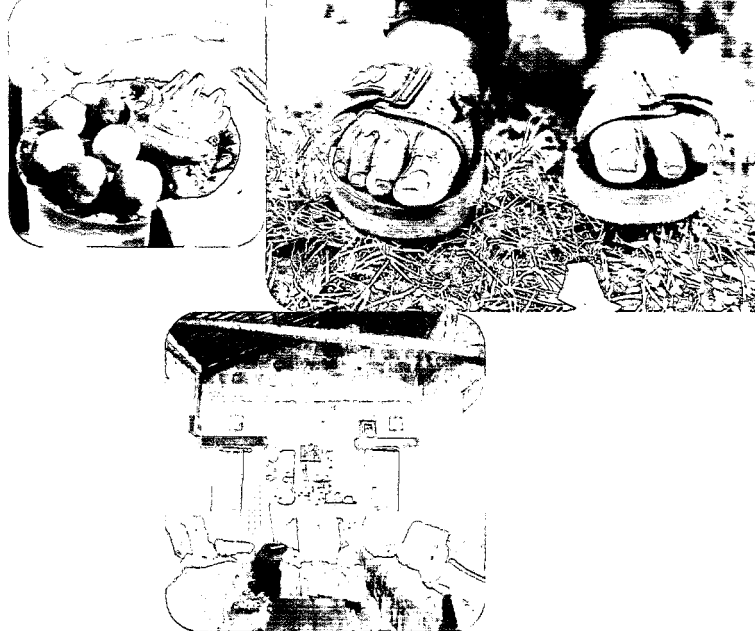
About 1.5% of newborns are born small for their gestational age due to growth retardation during pregnancy, a condition called SGA. Although many of these children catch up within their first or second year of life, 10–15% remain shorter than average. Recent research has shown that growth hormone prepared by recombinant DNA technology presents new opportunities to help children with this growth disorder. Norditropin® SimpleXx® is currently awaiting approval in Europe for the treatment of these children.



Damaris Wanjiku Murigi (Type 2 diabetes), Kenya.

When I was diagnosed with diabetes in 1996 at the age of 81, I knew nothing about it. I did not know what diabetes was and I had never heard of anyone having the disease. It was traumatising when the doctor told me.

It is very important for me to talk openly about diabetes, because in Kenya diabetes is not well known. I hope to pass on some of my experience. In the process of talking to many people some have in the end admitted that they think they also have the disease but they don't want to go and see a doctor. One of the reasons for this is that they believe in traditional medicine. I believe that I would not have been alive today if I had not been diagnosed and treated. One of my sons is a doctor, and he taught me how to inject the insulin. I ended up loving it!



## Improving access to health

In our increasingly globalised world, problems such as the growing poverty gap and environmental degradation are too complex for any single society, government or institution to solve on its own. At the same time, the public perception is that business is becoming more powerful. With that power comes an expectation that companies will assume greater responsibility for solving society's problems.

This expectation was made clear in the public outcry over the lawsuit filed against South Africa in 1998 by 41 pharmaceutical companies, including Novo Nordisk, in defence of their patent rights. The government of South Africa had sought to use a 1997 law to allow the delivery of generic AIDS medicine in South Africa. While the international patent convention (TRIPS) allows countries to produce copies of patented medicines in cases of national emergency such as AIDS, the pharmaceutical industry felt that the 1997 law gave the government carte blanche to abrogate patent rights for any pharmaceutical product, regardless of whether there was a national emergency. The case was settled in April 2001, with the industry abandoning its lawsuit and the South African government agreeing to honour its obligations under TRIPS, and to consult with industry on implementation of the disputed law.

Novo Nordisk believes it's possible to balance intellectual property rights with improved access to medicines for patients in developing countries. With its promise of 'being there' for its customers, Novo Nordisk has an obligation to contribute to better access to proper diabetes care in the poorest nations. The company has therefore developed the LEAD initiative – Leadership in Education and Access to Diabetes care – which aims to improve diabetes care in developing countries. This involves a four-pronged strategy for improved global healthcare, which includes

development of national diabetes strategies, building national healthcare capacity, ensuring the best possible pricing, and providing additional funding.

Achieving a sustainable model of healthcare in every country is the only way to address a global healthcare crisis. Today more than 150 million people around the world have diabetes. According to the World Health Organization (WHO), in a decade that number will grow to 250 million. While diabetes will continue to be a major problem for the developed world, it is estimated that approximately 70% of all new cases will appear in the developing nations. In the poorer part of the world, less than half of the people with diabetes are diagnosed today. Without timely diagnosis and adequate treatment, complications and morbidity from diabetes rise significantly.

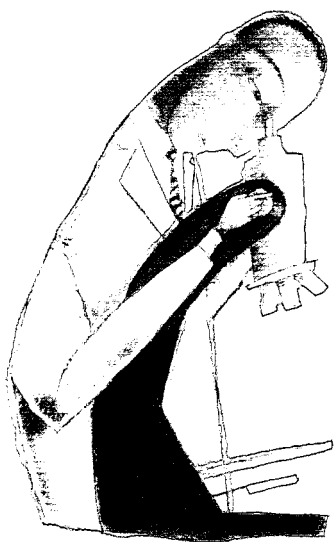
According to Derek Yach, executive director of Noncommunicable Diseases and Mental Health for the WHO, "We have compelling data. We know what needs to be done. But we cannot do it alone. There is a need for more dialogue and actions between the public and the private sectors". Novo Nordisk is committed to working with other partners to help ward off this impending healthcare crisis.

**A CALL FOR NATIONAL DIABETES STRATEGIES** The development of national diabetes strategies is the first of the four →

→ key issues in the Novo Nordisk model for addressing access to health, a model inspired by the WHO. Through its national diabetes strategies project, Novo Nordisk is identifying best practices from around the world and encouraging national governments to adopt these in their countries with the company's support.

The company has long recognised the value of partnerships as the means to sustainable solutions. Working actively to promote collaboration between all parties in the healthcare system in order to achieve common goals is part of Novo Nordisk's vision. In order to catalogue what has been achieved to date with collaboration, in 2001 the company published a compendium of their initiatives in developing countries.

The compendium describes more than 100 examples of partnerships, capacity building, educational programmes, grants for diabetes research, and donations at times of crisis in Asia, Africa and the Middle East, Latin America and the transitional economies of Europe and Asia. These range from a Novo Nordisk Diabetes Information Centre in Egypt staffed by a physician, two patient educators and a product specialist which has educated 500 nurses, 1,000 junior doctors and 500 children with diabetes, to the development and funding of the first Chinese-language diabetes information website by Novo Nordisk China.



#### RESEARCH GRANTS

### Novo Nordisk sponsors grants for diabetes

Novo Nordisk, the European Association for the Study of Diabetes (EASD) and the Juvenile Diabetes Foundation (JDF) have pooled their financial resources for the European Diabetes Research Programme. It's an initiative to find a cure for diabetes and lessen the impact of its complications.

Research grants totalling more than USD 10 million over 3 years are now available. Novo Nordisk has contributed USD 4.5 million.

The research consists of Type 1 and Type 2 diabetes parallel programmes. The Type 1 programme aims to study the causes of diabetes and its complications. The Type 2 diabetes study includes basic scientific issues but also, for the first time, calls for research methodology and theory to support the scientific development of patient-centred care and education.

The EASD, Novo Nordisk and the JDF hope that this initiative will bring about new discoveries and help provide far-reaching advances in diabetes research. The ongoing research will hopefully result in an improved understanding of genetics, disease processes, patho-physiology and in better treatment.

The application deadline for the first grants was 1 December 2001, and awards will be announced in April 2002 after a period of peer review. Learn about new grants and application criteria at [www.easd.org](http://www.easd.org).

**WORLDWIDE ANALYSIS** Also this year, Novo Nordisk embarked upon a World Partner Programme, an in-depth analysis of the diabetes care situation in six developing countries: Zambia, Tanzania, Bangladesh, Malaysia, El Salvador and Costa Rica. The aim is to collect knowledge that may be used to develop successful strategies for diabetes care in other developing countries.

According to Per Gernow, who heads the World Partner Programme, "The ideal outcome of this programme will be the emergence of a model that will guide us in how to best move forward to help a country improve diabetes care".

In Bangladesh, diabetes affects almost 3 million people, a figure that is expected to rise rapidly in the future. Poverty, widespread corruption, and a spiralling population make it a poor prospect for a stable and well-functioning healthcare system. Yet thanks to local champions like Professor Majera Mahtab, director of clinical services and research for the central medical institute of the Diabetes Association of Bangladesh (DAB), some 450,000 people with diabetes, or about 15% of the diabetic population, receive help. They have succeeded through a combination of persistence, patience, and entrepreneurial flair. Novo Nordisk provides 10% of the total purchase to DAB for free for distribution to the poor. The company also funds equipment purchase, education, awareness and research programmes.

#### BIOBÉRAS

### Expanding diabetes care activities in Latin America

As 2001 drew to a close, Novo Nordisk took a major step into the Latin American market by acquiring the controlling shares in Biobrás SA of Brazil, a well-established local supplier of insulin and the oral anti-diabetes drug, Glucoformin®.

The acquisition marks a major expansion of Novo Nordisk's activities in the large and growing market for diabetes care products in Brazil and other Latin American countries.

"The investment in Biobrás reflects our commitment to the Latin American market, and our goal of being the Latin American leader in diabetes care," said Lars Rebieen Sørensen, president and CEO of Novo Nordisk.

Together, Biobrás and Novo Nordisk will have a local production base, an experienced diabetes care sales force, and a highly competitive portfolio of diabetes care products in Brazil.

The partnership will be a solid platform for future launches of new diabetes care products from Novo Nordisk's pipeline to the benefit of people with diabetes in Brazil and Latin America in general.

Brazil is the largest market for diabetes care products in Latin America, with more than 5 million Brazilians affected

"Providing free insulin is one thing, but helping us get the message out through education and greater awareness is equally important," says Professor Mahtab. "Partnerships with the private sector are very meaningful for us. People with diabetes in Bangladesh need a lot of support."

**AFFORDABLE PRICING FOR THE POOREST** No matter how substantial the commitment of those engaged in improving access to diabetes care, the cost of insulin will always be a crucial factor. That is why Novo Nordisk has established a policy to make insulin available to the 50 poorest countries designated by the United Nations, at prices not to exceed 20% of the average price of North America, Europe and Japan.

"We advocate sustainable pricing," says Lars Rebieen Sørensen, CEO of Novo Nordisk. "That means we will not levy a profit on these products sold to the developing world, but rather the costs of our research and development will be borne by the developed world. Of course, this hinges on a psychological contract – namely that developed countries are willing to subsidise developing countries. But I am convinced that public perception to this policy will be positive, and that the developed countries are willing to pay a higher price than that of the developing world".

by the disease. In 2000, sales of diabetes care products in the Brazilian market were estimated at USD 133 million. Sales of insulin products accounted for an estimated USD 42 million, and oral anti-diabetic drugs (OADs) accounted for an estimated USD 91 million. The insulin market is expected to grow by 6.4% from 2000 to 2001, and the market for OADs is expected to grow by 6% in the same period.

At the time of the announcement, Biobrás employed around 570 people, most of whom work in the company's insulin production plant. Novo Nordisk employs 74 people in Brazil.

The acquisition is subject to clearance by the Brazilian competition authorities which is anticipated during 2002.

#### STENO DIABETES CENTER

### Linking treatment with teaching

The Steno Diabetes Center (SDC) outside Copenhagen, Denmark, owned by Novo Nordisk but part of the Danish public health system, is a specialised hospital that links the treatment of diabetes with teaching, research and development. Research at the SDC results in the publication of some 80 scientific and specialist articles a year in the quest to find a cure for diabetes.

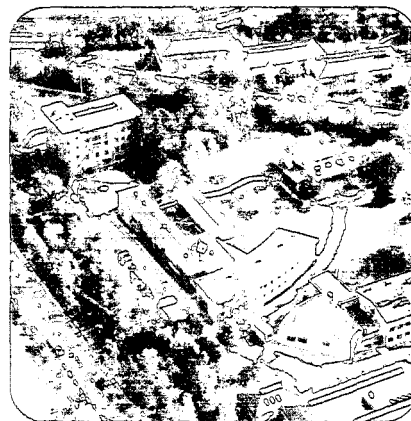
Novo Nordisk and the centre work together on short- and long-term diabetes projects so that day-to-day clinical efforts inspire research, and vice versa. When researchers make a discovery about treating Type 2 diabetes, for instance, the results are immediately transferred to the clinic in the form of a development project, and later introduced as part of routine practice. The SDC teaches medical students and trains junior doctors, general practitioners and specialists. Nurses, dieticians and chiropodists can likewise receive supplementary training at the facility.

One of the centre's most recent projects with Novo Nordisk is the running of about eight courses a year in India and China in practical diabetology, research training in epidemiology and updates in

**WORLD DIABETES FOUNDATION** While more affordable pricing will help many people in the developing world with diabetes, proper diabetes care will still be out of reach for the poorest people in these countries. To help meet the needs of this population, Novo Nordisk is establishing the World Diabetes Foundation, which will be subject to shareholder approval in March 2002. This foundation, to which the company will commit DKK 500 million over the next 10 years, will aim to improve diabetes care in the poorest countries through the funding of education, capacity building, distribution and procurement of essential drugs and monitoring.

While the Foundation is an initiative of Novo Nordisk, which is currently the sole sponsor, it will be governed independently of the company by a Board of Directors comprised of individuals with expertise in the field of diabetes. It is Lars Rebieen Sørensen's belief that the Foundation will be "enormously motivating for our employees and other stakeholders. I hope it will lead to a positive spiral in which other companies are inspired to make similar efforts to assist the developing world".

For more information, visit [www.novonordisk.com/sustainability](http://www.novonordisk.com/sustainability).



diabetes treatment. This new initiative, called the STAR project (Steno Training and Application of Resources), which is sponsored by the Novo Nordisk Foundation, aims to help build awareness about diabetes in developing countries.

Denmark's public health system pays for the treatment of the SDC's patients, of which there are about 5,600 at any given time. Novo Nordisk finances about two-thirds of the teaching, research and development. The last third is paid for by grants from the European Union and a variety of national and international foundations including the Novo Nordisk Foundation.

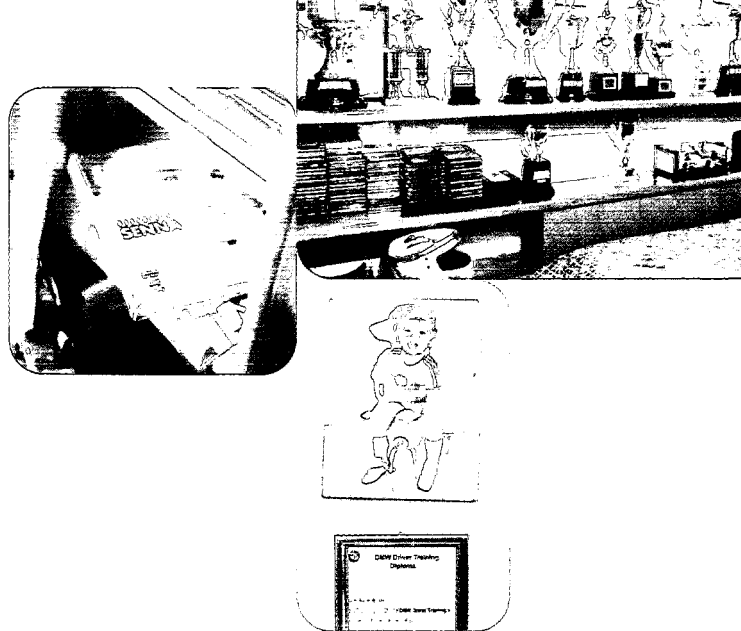


Ricardo Carreiro (Type 1 diabetes), Brazil.

Twice I've been the Curitiba Champion in go-kart racing. I was also the state champion in go-karts. Now I participate in the Championship Formula Junior races around Brazil. I practise racing three times a week and work out with my personal trainer for another 3 days a week, so I am in good shape for my races.

My diabetes doesn't affect my racing – I eat more before I race or work out, so that my blood sugar doesn't drop too low. I test my blood twice a day, and also before and after exercising. I know about the complications from diabetes, but I am not worried because I have such strong control over my blood sugar level.

My diabetes has affected me in a positive way – I am now more educated about my health, I don't drink alcohol, I eat healthy foods, and exercise regularly. I am a very focused person, which is the way a potential champion of Formula One should be!



## The promise of insulin analogues

Novo Nordisk has been involved in diabetes care for over 75 years, with the long-term goal of finding a cure for diabetes. But until then the company is committed to offering the best possible treatment solutions. So how do the new generation of 'designer' insulin analogues help to fulfil this promise?

Novo Nordisk believes that the only way to head off the stampede of diabetes is through complete personal management of the disease. A person with diabetes must learn to keep the disease in check through the use of insulin and a relatively simple change in lifestyle. Many of the long-term health problems associated with diabetes can be avoided if the person with diabetes is supported by healthcare professionals and family.

**THE INSULIN REVOLUTION** When a method to produce animal-derived insulin was developed almost 80 years ago, it revolutionised the treatment of diabetes because it provided a substitute for the inadequate amount of a person's own insulin. For almost the first 60 years, insulin for widespread clinical use was extracted from the pancreas of pigs and cows. However, insulin formulations, treatment strategies, and methods and routes of delivery have changed considerably over the years.

Early concerns about purity led to the production of highly purified insulins during the 1970s. Human 'monocomponent' insulin, extracted from a pig's pancreas and converted to become identical to human insulin, finally became a reality in 1982 through innovative work by Novo Nordisk scientists. But with the advent of recombinant DNA technology, human insulin could be produced by microorganisms, as in Novo Nordisk's example yeast, and animal pancreas was no longer needed. This innovation, in turn, has led to the development of analogues, also called 'designer' insulins.

Today, one goal of insulin research is the alteration of the insulin molecule to make treatment regimes easier. Such research looks at control of the insulin absorption rate, and the onset and duration of action. It also focuses on novel methods of administration, and the insulin products that provide optimal dosing and timing to match the user's lifestyle and therapeutic needs.

**HUMAN INSULIN VERSUS INSULIN ANALOGUES** Human insulin preparations are made through recombinant DNA technology and are identical to the insulin produced by the human pancreas. However, even the fastest-working human insulins need to be injected 30 minutes before a meal because it takes time for insulin to be absorbed into the bloodstream. This demands a controlled and restricted lifestyle, and people tend to have difficulties keeping to such a regime.

An insulin analogue is a tailored form of insulin in which certain amino acids in the insulin molecule have been modified. The analogue acts in the same way as the original insulin, but with some beneficial differences for people with diabetes. A rapid-acting insulin analogue, for example, can be injected immediately before a meal, or up to 15 minutes after the beginning of the meal, making it much more convenient than injected human insulin. These rapid-acting analogues are also better at dealing with blood glucose levels after a meal which means that the patient is at lesser risk of too-low blood glucose (hypoglycaemia) between meals or overnight.

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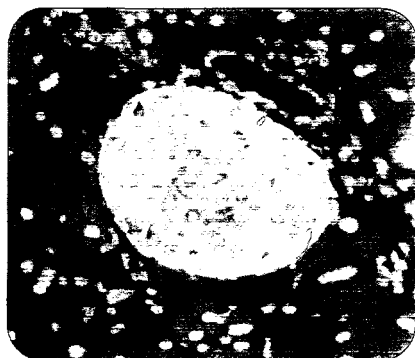
→ Novo Nordisk's insulin analogue portfolio includes three products of particular interest for people with Type 1 diabetes: the rapid-acting insulin analogue NovoRapid® (NovoLog® in the US), also known as insulin aspart; the long-acting insulin analogue NN304, also known as insulin detemir, currently in Phase 3 clinical trials; and the dual-release insulin analogue, NovoMix® (called NovoLog®Mix in the US).

NovoRapid® is identical to human insulin, except that the amino acid aspartate is substituted into the molecule in place of a proline. The drug mimics the body's natural insulin secretion pattern in connection with meals, which is critically important for proper blood glucose control. In contrast, long-acting analogues, called basal insulins, make the 'background' levels of insulin more predictable. This reduces the risk of hypoglycaemia,

which is a particular concern at night for people with diabetes.

**DUAL-RELEASE INSULIN** Sticking to the treatment programme is one of the hardest challenges to an individual's personal management of diabetes. NovoMix® 30 (called NovoLog®Mix 70/30 in the US) is a dual-release insulin analogue for treating Type 1 and also Type 2 diabetes, which reduces the number of daily injections to two.

NovoMix® 30 is an analogue containing NovoRapid®. Its dual-release function consists of 30% rapid-acting insulin aspart (NovoRapid®) and 70% intermediate-acting crystallised insulin aspart. It provides fast and lasting blood glucose control, and more closely resembles the body's natural insulin release pattern than human insulin.



#### BIO-ARTIFICIAL ORGANS

### Research into possibility of an artificial pancreas

In 2001, researchers from the University of Strathclyde in Scotland reportedly succeeded in building an 'artificial liver'. They suggested that a device could also be implanted into the body of people with pancreatic disorders such as diabetes, thus avoiding the need for insulin injections.

The invention of an artificial pancreas would most likely be based either on encapsulated beta cells, or on a fully-automated, closed-loop insulin pump and glucose monitoring system. Such solutions, however, present major challenges to scientists.

Key problems for encapsulated cells are cell survival, insulin productivity, immune response and maintaining the complicated control mechanisms for insulin secretion. For closed loops, the main challenge is to obtain a glucose measurement reliable enough to control insulin delivery from a pump, and to respond quickly enough to changing glucose levels.

One day, focused research may overcome these obstacles and spark a revolution in the treatment of diabetes.

#### ICU STUDY

### Insulin saves lives of intensive care patients

Critically ill patients often suffer from hyperglycaemia and insulin resistance, even if they have not previously been diagnosed with diabetes. A recent clinical study has shown that intensive insulin therapy can have a dramatic, life-saving effect on critically ill patients in hospital intensive care units (ICUs).

The study, published in November 2001 in the *New England Journal of Medicine*, found that, compared to standard therapy with insulin, intensive insulin therapy reduced ICU deaths by no less than 42%. The greatest reduction in mortality involved deaths due to lethal multiple-organ failure caused by severe infections.

It had long been known that critically ill patients show high levels of blood glucose, called hyperglycaemia, and insulin resistance. While a number of studies have convincingly linked chronically high blood glucose levels to morbidity and mortality in diabetes, experts have been unsure whether hyperglycaemia in ICU patients without a history of diabetes was part of a beneficial adaptation to stress or a disturbance that should be more strictly controlled. Traditionally, most ICUs have administered insulin therapy only when blood glucose levels exceeded twice the normal level.

Researchers, led by Professor Greet Van den Berghe from University Hospital Gasthuisberg in Leuven, Belgium, set out to test whether maintaining normal blood glucose levels would benefit ICU patients. They performed a prospective, randomised, controlled study involving 1,548 critically ill adult patients admitted

to the surgical ICU who were receiving mechanical ventilation. Patients received a Novo Nordisk human insulin product, Actrapid® HM, known as Novolin® in the US. An interim safety analysis revealed such a marked and significant benefit that the study had to be discontinued for ethical reasons.

In addition to reducing ICU deaths, intensive insulin therapy reduced the risk of complications that are common among intensive care patients and prevented acute renal failure. The study also showed that the benefits from intensive insulin therapy substantially reduced the use of ICU resources.

"These findings represent major progress in ICU medicine because the benefits were substantial, and were obtained with a simple and inexpensive insulin treatment," said Dr Van den Berghe. The research was supported by research grants from the Belgium Fund for Scientific Research, the Research Council of the University of Leuven, the Belgian Foundation for Research in Congenital Heart Diseases and an unrestricted grant from Novo Nordisk.

Read more at [www.nejm.com](http://www.nejm.com) or [www.novonordisk.com](http://www.novonordisk.com).

**FUTURE THERAPIES** Within the next few years, Novo Nordisk expects to offer the most comprehensive range of insulin analogues and mixes on the market. At the same time, it is seeking new ways to defeat diabetes at all stages of its progression.

For example, Novo Nordisk is at the forefront of research into how stem cells can be transformed into insulin-producing beta cells which could then be used to replace the beta cells missing in people with Type 1 diabetes. In conjunction with this, ways are being sought to prevent the body's immune system from attacking beta cells in the auto-immune response which causes the disease in the first place.

Novo Nordisk also collaborates with an expert panel to monitor research into the genes that control glucose and lipid metab-

olism and how these may contribute to the development of diabetes. In the future gene therapy may be a possibility which would involve implanting genes into people with diabetes to prevent or control their disease.

Novo Nordisk's ultimate goals are to find ways of being able to prevent or cure both types of diabetes, and as an indication of its commitment, it is investing more in diabetes research and development than any other pharmaceutical company in the world. However, such preventions or cures are still many years away and so Novo Nordisk is also committed to developing and offering better treatments for people with diabetes in the intervening period.

For more information, visit [www.novonordisk.com/science](http://www.novonordisk.com/science).

NN2211

## Lowering glucose and controlling bodyweight

Increase in bodyweight is a major risk factor in Type 2 diabetes, so there is a clear need for new drugs that control bodyweight.

Studies have shown that the simple advice for people with Type 2 diabetes – to lose weight by getting more exercise and eating less – is difficult to follow although many people could potentially control their disease by these relatively simple changes in lifestyle.

NN2211, a drug under development by Novo Nordisk, represents a new class of antidiabetic drug. The glucose lowering effect of NN2211 seen in both pre-clinical and clinical studies is unique, as the drug only reduces blood glucose when it's too high, thus eliminating the threat of hypoglycaemia.

The additional regulation of appetite by NN2211 seen in preclinical studies

makes it an interesting drug for treatment of Type 2 diabetes.

NN2211 is a long-acting derivative of the natural hormone GLP-1, which stimulates the production and release of insulin in the body. It's designed for a simple and once-a-day dose regime. Novo Nordisk has achieved this by modifying GLP-1, which itself is not a suitable drug candidate because it's too rapidly eliminated from the body.

The profile of NN2211 has been confirmed in Phase 1 trials, where a single dose at bedtime could control blood glucose levels the following day.

NN2211 is currently in Phase 2 clinical trials, in which the effect on regulation of blood glucose and bodyweight are being investigated.

NN622

## Controlling blood fat levels to save lives

A drug being developed under the name NN622 is a second generation insulin sensitiser with a dual action. Sensitisers are compounds that stimulate the body's sensitivity to insulin. Now in Phase 3 testing, NN622 regulates blood lipid (fat) levels while it also regulates blood glucose.

Lipid disorders, called dyslipidaemia, occur in at least half of the Type 2 diabetes population and these are different from the types of lipid disorders seen in people without diabetes. Contrary to other lipid-lowering compounds available today, NN622 is designed to correct the specific type of dyslipidaemia apparent in Type 2 diabetes.

Disturbances in lipid levels increase the risk of cardiovascular disorders, which is the number-one cause of death of people with Type 2 diabetes. If blood fat cholesterol and triglyceride levels are reduced and controlled, the threat of cardiovascular problems such as thrombosis and stroke can be virtually eliminated.

NN622 is a peroxisome proliferator-activated receptor (PPAR) alpha and gamma agonist. The compound, discovered by Dr Reddy's Research Foundation and licensed by Novo Nordisk, is chemically and pharmacologically different from the PPAR gamma agonists currently on the market. Indications are that Novo Nordisk is at the forefront of development of this new generation of therapeutics.



DKK million	2001	2000	1999
Net turnover	23,776	20,811	16,423
Production costs	5,979	5,044	4,227
Gross profit	17,797	15,767	12,196
Sales and distribution costs	7,215	6,254	4,812
Research and development costs	3,970	3,390	2,748
Administrative expenses	1,865	1,878	1,721
Restructuring expenses	–	–	350
Licence fees and other operating income (net)	867	571	962
Operating profit	5,614	4,816	3,527
Share of profit in associated companies	49	3	2
Financial income	499	382	218
Financial expenses	132	361	398
Profit before taxation	6,030	4,840	3,349
Corporation tax	2,165	1,753	1,348
<b>Net profit</b>	<b>3,865</b>	<b>3,087</b>	<b>2,001</b>
Earnings per share (DKK)	11.18	8.84	5.60
Earnings per share diluted (DKK)	11.10	8.82	5.59

## Consolidated statement of changes in shareholders' funds

DKK million	Share capital	Share premium account	Retained earnings	Other comprehensive income	Total
<b>2001</b>					
Balance at the beginning of the year	754	2,565	13,289	373	16,981
Net profit for the year			3,865		3,865
Write-down of B share capital during the year	(45)		45		–
Purchase of own shares			(24)		(24)
Sale of own shares			34		34
Employee shares sold			168		168
Dividends declared			(916)		(916)
Exchange rate adjustment of participating interests in subsidiaries				112	112
Reversal of deferred (gain)/loss on future cash flow hedges at the beginning of the year				(327)	(327)
Deferred gain/(loss) on future cash flow hedges at the end of the year				188	188
Other adjustments				56	56
Balance at the end of the year	709	2,565	16,461	402	20,137

At the end of the year proposed dividends of DKK 1,161 million is included in retained earnings.

For full information on the Consolidated financial statements, see the *Annual Financial Report*.

DKK million

31 Dec 2001 31 Dec 2000

**ASSETS**

Intangible fixed assets	14	32
Land and buildings	5,353	5,354
Plant and machinery	3,072	2,690
Other equipment	1,073	995
Fixed assets in course of construction and payments on account	4,128	1,860
<b>Tangible fixed assets</b>	<b>13,626</b>	<b>10,899</b>
Amounts owed by affiliated companies	–	25
Participating interests in associated companies	1,307	1,019
Other securities and participating interests	94	90
<b>Fixed asset investments</b>	<b>1,401</b>	<b>1,134</b>
<b>Total fixed assets</b>	<b>15,041</b>	<b>12,065</b>
<b>Stocks</b>	<b>4,760</b>	<b>3,972</b>
Trade debtors	3,882	3,396
Amounts owed by affiliated companies	76	175
Tax receivable	399	234
Other debtors	1,685	1,233
<b>Debtors</b>	<b>6,042</b>	<b>5,038</b>
<b>Current asset investments</b>	<b>1,402</b>	<b>2,567</b>
<b>Cash at bank and in hand</b>	<b>1,660</b>	<b>1,278</b>
<b>Total current assets</b>	<b>13,864</b>	<b>12,855</b>
<b>Total assets</b>	<b>28,905</b>	<b>24,920</b>

**SHAREHOLDERS' FUNDS AND LIABILITIES**

Share capital	709	754
Share premium account	2,565	2,565
Retained earnings	16,461	13,289
Other comprehensive income	402	373
<b>Total shareholders' funds</b>	<b>20,137</b>	<b>16,981</b>
Provision for deferred tax (net)	1,358	970
Other provisions	541	523
<b>Provisions</b>	<b>1,899</b>	<b>1,493</b>
<b>Banks and other credit institutions</b>	<b>863</b>	<b>950</b>
<b>Long-term debt</b>	<b>863</b>	<b>950</b>
Bank loans	817	821
Trade creditors	970	977
Amounts owed to affiliated companies	16	39
Tax payable	62	138
Other short-term liabilities	4,141	3,521
<b>Short-term liabilities</b>	<b>6,006</b>	<b>5,496</b>
<b>Total long-term debt and short-term liabilities</b>	<b>6,869</b>	<b>6,446</b>
<b>Total shareholders' funds and liabilities</b>	<b>28,905</b>	<b>24,920</b>

DKK million	2001	2000	1999
<b>Net profit</b>	<b>3,865</b>	<b>3,087</b>	<b>2,001</b>
<b>Reversals with no effect on cash flow:</b>			
Corporation tax	2,165	1,753	1,348
Depreciation and amortisation	1,081	1,038	943
Interest receivable and interest payable	(192)	(184)	(117)
Other reversals with no effect on cash flow	477	240	64
Corporation tax paid	(1,900)	(1,739)	(1,283)
Interest received and interest paid (net)	280	154	89
<b>Cash flow before change in working capital</b>	<b>5,776</b>	<b>4,349</b>	<b>3,045</b>
<b>Change in working capital:</b>			
(Increase)/decrease in trade debtors and other debtors	(1,247)	664	(616)
(Increase)/decrease in amounts owed by/to affiliated companies	76	(131)	32
(Increase)/decrease in stocks	(847)	(377)	(321)
Increase/(decrease) in trade creditors and other creditors	562	753	687
<b>Cash flow from operating activities</b>	<b>4,320</b>	<b>5,258</b>	<b>2,827</b>
<b>Investments:</b>			
Sale of fixed asset investments	17	85	–
Purchase of intangible fixed assets and fixed asset investments	(305)	(63)	(29)
Effect of ZymoGenetics Inc's deconsolidation in 2000	–	(427)	–
Sale of tangible fixed assets	97	225	96
Purchase of tangible fixed assets	(3,943)	(2,366)	(1,361)
<b>Cash flow from investing activities</b>	<b>(4,134)</b>	<b>(2,546)</b>	<b>(1,294)</b>
<b>Free cash flow</b>	<b>186</b>	<b>2,712</b>	<b>1,533</b>
<b>Financing:</b>			
New long-term loans	–	–	93
Repayment of long-term loans	(64)	(36)	(247)
Loan repaid from Novozymes	25	40	2,398
Purchase of own shares	(24)	(2,472)	(1,448)
Sale of own shares	34	189	10
Value adjustment of Novozymes shares	–	818	–
Dividends paid	(916)	(691)	(562)
<b>Cash flow from financing activities</b>	<b>(945)</b>	<b>(2,152)</b>	<b>244</b>
<b>Net cash flow</b>	<b>(759)</b>	<b>560</b>	<b>1,777</b>
Unrealised gain/(loss) on exchange rates and current asset investments included in cash and cash equivalents	(27)	18	14
<b>Net change in cash and cash equivalents</b>	<b>(786)</b>	<b>578</b>	<b>1,791</b>
Cash and cash equivalents at the beginning of the year	3,073	2,495	704
<b>Cash and cash equivalents at the end of the year</b>	<b>2,287</b>	<b>3,073</b>	<b>2,495</b>
Undrawn committed credit facilities	5,046	4,812	4,439
<b>Financial resources at the end of the year</b>	<b>7,333</b>	<b>7,885</b>	<b>6,934</b>

# Focus on shareholder value

Novo Nordisk's management is focused on creating long-term shareholder value. In November 2000 the company was split into two entities, Novo Nordisk A/S and Novozymes A/S to give each entity a focused profile with Novo Nordisk continuing as a focused healthcare company.

For years, Novo Nordisk has taken active measures to support shareholder value:

- The Novo Nordisk share was split in order to increase liquidity of shares, in both 1997 and 2001.
- The dividend paid to shareholders in 2001 was DKK 2.65 per share to give investors not just gains in the share price, but a direct benefit from the company's earnings performance.
- Novo Nordisk has conducted two share buy-back programmes since 1998, of DKK 3 billion each.
- In August 2001, Novo Nordisk cancelled 6% of its shares to gain the flexibility to make new share buy-back schemes.
- An annual stock option programme based on performance covers around 400 key Novo Nordisk employees.
- All members of top management have been required to invest the equivalent of 1 year's gross salary in Novo Nordisk stock. They have received four options for each share invested as an additional incentive.
- In May 2001, the Board of Directors decided to implement an employee share programme, under which all employees were given the opportunity to buy 100 shares at a favourable price.
- Novo Nordisk interacts with other stakeholders (see below).
- Novo Nordisk also maintains an open communication and financial reporting policy, such as disclosing changes in equity and options held by its management and Board of Directors.

**ACHIEVEMENTS IN 2001** Following the demerger on 13 November 2000, the year 2001 was the first full year in which Novo Nordisk A/S traded as a pure healthcare company.

The turnover of Novo Nordisk's B shares on the Copenhagen Stock Exchange amounted to DKK 83.2 billion in 2001. The

share price ended the year at DKK 342, compared with a price at year-end 2000 of DKK 285. The market value of Novo Nordisk's outstanding share capital increased by DKK 20 billion to DKK 119 billion. The Novo Nordisk B share is the most traded stock on the Copenhagen Stock Exchange.

**SPLIT OF SHARES** On 4 April 2001, the trading unit of Novo Nordisk B shares was changed from DKK 10 to DKK 2, and the ratio of B shares to American Depositary Receipts (ADRs) from 1:2 to 1:1.

**NEW, LONG-TERM TARGETS** Since the demerger in 2000, Novo Nordisk's management and Board of Directors have redefined the long-term financial targets to put them in line with those of a focused healthcare company. They decided to maintain their target of 15% annual growth in earnings before interest and tax (EBIT), as it compared well with the industry in general, but the EBIT margin was raised by 5% to 25%, a level seen as an industry benchmark. They also began focusing on the return on invested capital (ROIC) on a post-tax basis, and set the target at 25%. Finally, a focus on cash generating ability is pursued through targeting a level of 60% cash to earnings over a 3 year average.

With the pursuit of these long-term targets, the company's management believes it will be able to balance value generation with growth for Novo Nordisk shareholders.

**REDUCTION IN SHARE CAPITAL** At Novo Nordisk's ordinary General Meeting on 20 March 2001, it was decided to reduce the company's B share capital by 6%, nominally from DKK 646,901,120 to DKK 601,901,120 by cancelling DKK 45 million of the company's holding of its own shares. This reduction took effect in August 2001 to give the company flexibility in its capital structure and to facilitate potential future share buy-back programmes.

## SUSTAINABILITY INDEXES

### Business with conscience

Financial performance is just one way of measuring a company's potential for success. In today's world, it must not only build financial capital, but human and social capital, too. Corporate sustainability helps create long-term shareholder value by ensuring that a company can maintain its licence to operate and innovate.

The past few years have seen the emergence of 'sustainability' indexes in addition to stock market indexes.

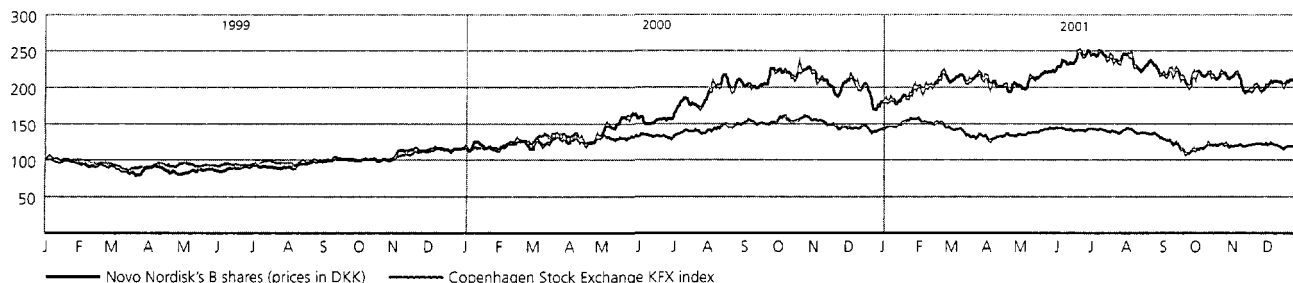
While a traditional share index follows

a company's share price development, based largely on the company's financial performance, sustainability indexes such as the Dow Jones Sustainability Group Index track its performance in the more intrinsic values of the Triple Bottom Line: being environmentally sound, socially responsible and economically viable. Some 200 companies have been selected through comprehensive screening in consultation with the independent asset management company, SAM. Novo Nordisk has been included since its inception and in an industry ranking, Novo Nordisk is among the top performers. The leaders set industry-wide best practices in the areas of strategy, innova-

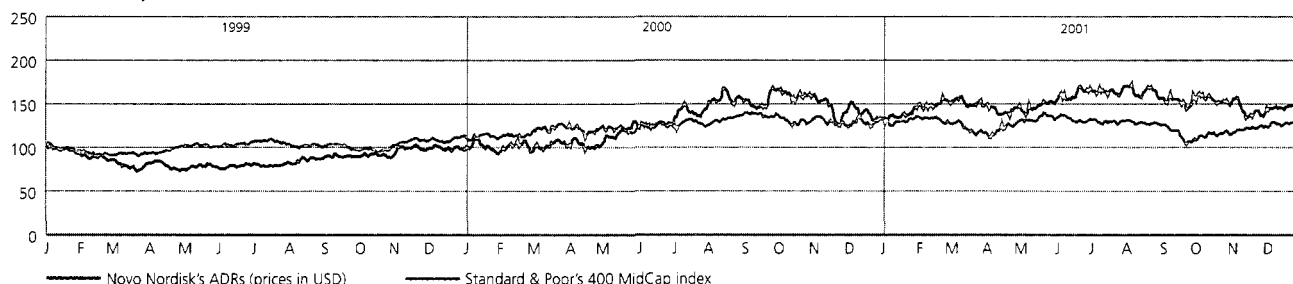
tion and governance, as well as relations with shareholders, employees and other stakeholders.

Another important and mixed type of index is the FTSE4GOOD, which functions both as a benchmark and a tradable index. These indexes track share price development on selected shares that are screened for their performance on three main criteria: environmental sustainability, dialogue with stakeholders and performance on human rights. Novo Nordisk is among the companies selected in Europe. See how Novo Nordisk performs by visiting [www.sustainability-index.com](http://www.sustainability-index.com) and [www.ftse4good.com](http://www.ftse4good.com).

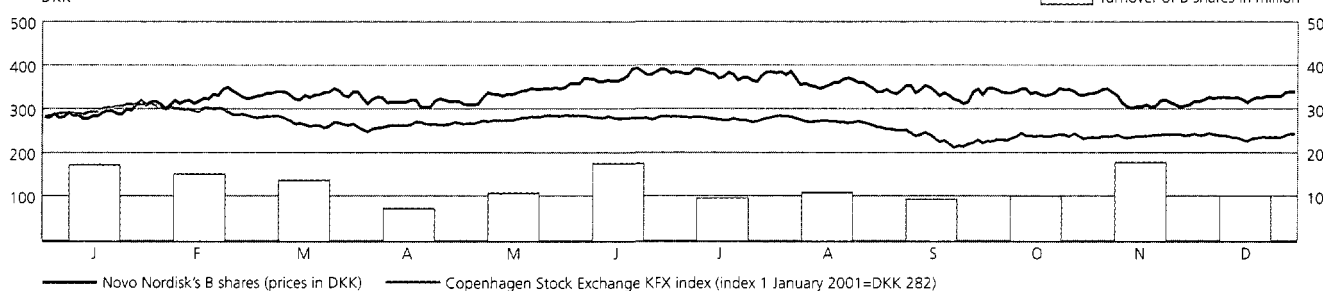
Price development of Novo Nordisk's B shares on the Copenhagen Stock Exchange relative to the KFX index  
Index 1 January 1999=100



Price development of Novo Nordisk's ADRs on the New York Stock Exchange relative to Standard and Poor's 400 MidCap index  
Index 1 January 1999=100



Price development and monthly turnover of Novo Nordisk's B shares on the Copenhagen Stock Exchange, year 2001  
DKK



## THE YEAR AHEAD

### Financial calendar for 2002

12 March	Annual General Meeting
<b>Dividend</b>	
13 March	Ex-dividend B shares and ADRs
15 March	Record date B shares and ADRs
18 March	Payment B shares
25 April	Payment ADRs

### Announcement of financial results

30 April	First 3 months
6 August	Half year
29 October	9 months
6 February 2003	Full year

### Shareholder magazine available

Mid-May	First 3 months
Mid-August	Half year
Mid-November	9 months

## INVESTOR RELATIONS

### Questions from investors

Shareholders, analysts, representatives from the financial community, brokers and other stakeholders are asked to communicate via Novo Nordisk's Investor Relations service for questions concerning Novo Nordisk and our business areas:

Outside North America:  
Novo Nordisk A/S  
Novo Allé  
2880 Bagsværd  
Denmark

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Fax: +1 212 867 0298  
E-mail: rrhj@novonordisk.com

Novo Nordisk's homepage for investors can be found at [www.novonordisk.com](http://www.novonordisk.com). It includes historic and updated information about our activities: press releases from 1995 and onwards, financial results, investor presentations, background information, annual reports and accounts, and environmental and social reports.

**MADS ØVLISEN****KURT BRINER****TOVE FUNDER-NIELSEN****NIELS JACOBSEN****ULF J JOHANSSON****ANNE MARIE KVERNELAND****KURT ANKER NIELSEN****STIG STRØBÆK****JØRGEN WEDEL**

**MADS ØVLISEN** Chairman. Chairman of the Boards of LEGO A/S and The Royal Theatre • **KURT BRINER** Director. Member of the Boards of CBax SA, Equity4Life AG, OM Pharma, Progenics Pharmaceuticals Inc, Institut des Vaisseaux et du Sang (IVS), and the Supervisory Board of Byk Gulden

• **TOVE FUNDER-NIELSEN** Specialist laboratory technician, Novo Nordisk A/S • **NIELS JACOBSEN** President & CEO, Oticon A/S and William Demant Holding A/S. Chairman of the Board of Hearing Instrument Manufacturers Patent Partnership A/S; member of the Boards of Højgaard Holding A/S and Micro Matic Holding A/S • **ULF J JOHANSSON** Dr Tech. Chairman of the Boards of Europolitan Holdings AB, Kungliga Tekniska Högskolan in Stockholm, Frontec AB and Zodiac Venture Capital AB; member of the Boards of Novo A/S, and Trimble Navigation Ltd • **ANNE MARIE KVERNELAND** Laboratory technician, shop steward, Novo Nordisk A/S • **KURT ANKER NIELSEN** Vice chairman. As part of Kurt Anker Nielsen's position as co-president of Novo A/S he serves as vice chairman of Novo Nordisk A/S and Novozymes A/S and as a Board member of DAKO A/S, ZymoGenetics Inc and Medicon Valley Capital AB. Further, Kurt Anker Nielsen serves as chairman of the Board of Incentive A/S and as a Board member of Coloplast A/S. • **STIG STRØBÆK** Electrician, shop steward, Novo Nordisk A/S • **JØRGEN WEDEL** Former executive vice president, the Gillette Company

**BOARD MEETINGS CALENDAR 2002:** The Board of Directors ordinarily meet seven times a year, including the meetings held at the announcements of financial results and the Annual General Meeting.



(From left to right)

**JESPER BRANDGAARD** Chief financial officer • **MADS KROGSGAARD THOMSEN** Chief science officer  
 • **LARS REBIEN SØRENSEN** President and chief executive officer, member of the Board of Scandinavian Airlines System AB and ZymoGenetics Inc • **LARS ALMBLOM JØRGENSEN** Chief operating officer • **KÅRE SCHULTZ** Chief of staffs and quality

## Management Committee

**MARIANN STRID CHRISTENSEN**  
Quality

**KLAUS EHRLICH**  
Germany, Austria, Switzerland

**PETER BONNE ERIKSEN**  
Project Management & Regulatory Affairs

**TORBEN SKRIVER FRANDSEN**  
Novo Nordisk IT

**PÁL HELMICH**  
Europe (excl Germany, Austria, Switzerland)

**JESPER HØILAND**  
International Marketing

**PER JANSEN**  
Novo Nordisk Servicepartner

**LARS GULDBÆK KARLSEN**  
Protein Delivery Systems

**LISE KINGO**  
Stakeholder Relations

**PETER KURTZHALS**  
Discovery

**ROGER MOORE**  
Japan and Oceania

**OLE RAMSBY**  
Legal Affairs

**WITTE RIJNBERG**  
International Operations

**MARTIN SOETERS**  
North America

**PER VALSTORP**  
Product Supply

**HANS OLE VOIGT**  
Novo Nordisk Engineering

## SUSTAINABLE MANAGEMENT

## Reporting on the Triple Bottom Line

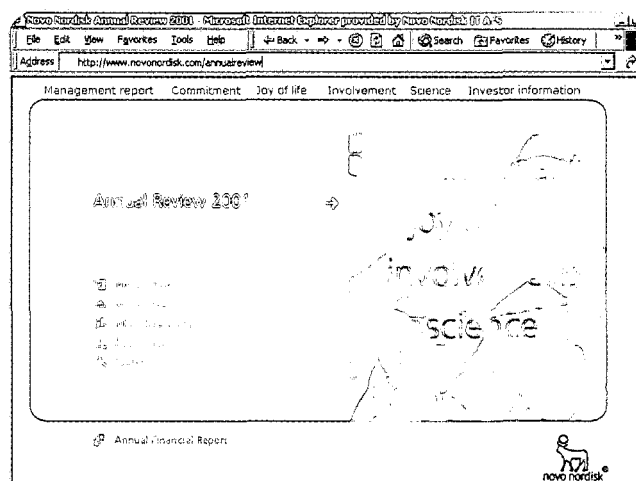
Novo Nordisk has been pursuing a consistent approach to implementing the Triple Bottom Line – social and environmental responsibility and economic viability – for more than a decade, and we report annually on our performance. Reporting is one of the methods for ensuring that the company meets the commitments made in the Novo Group's Charter. It demonstrates how we put our values into action.

Issued in March 2002, the report covers the company's activities on social and environmental responsibility and economic viability within 2001. It also establishes new targets that will guide our future direction. As such, it complements the *Annual Review* and *Annual Financial Report*.

Over the years, we have developed our reporting to reflect the changing agendas in society and in our company. This year, a major theme in the section on social responsibility is global access to health, addressing the need to facilitate better access to proper diabetes care in the poorest nations.

Our activities are in areas where values and ethics are put to the test on a daily basis. We did not create the dilemmas but we need to face them. In this report, we present some of the key issues for Novo Nordisk as a pharmaceutical company, as a global business, as a corporate citizen and as an employer of choice.

The report is available at [www.novonordisk.com/sustainability](http://www.novonordisk.com/sustainability). Hard copies of the report in both English and Danish can be ordered from the same address.



### ONLINE ANNUAL REVIEW

## Novo Nordisk is just a click away!

Our *Annual Review* 2001 is now available on the Internet at [www.novonordisk.com/annualreview](http://www.novonordisk.com/annualreview) featuring interactive charts and links to a host of resources, including a downloadable version of the *Annual Financial Report*.

Take the opportunity to visit us online and explore the universe of Novo Nordisk websites. From our corporate website at [www.novonordisk.com](http://www.novonordisk.com) you can access a wide range of services, from country websites to patient communities; from professional forums to children's educational materials.

You can also register for investor services including e-mail updates and shareholder newsletters, and follow our share price.



The Swan mark is a Scandinavian standard ensuring an environmentally-responsible production of printed material.



This year, for the first time, we have produced two publications – an *Annual Review* and an *Annual Financial Report* – instead of the single publication produced in the past, called the annual report. The content of the single publication has been divided into two publications so that readers can more easily locate the information of interest to them. In the future shareholders will have the opportunity to select which publication they wish to receive, or indeed can select to receive both publications.

The *Annual Review* is a consumer style review of the last year's activities and events, including feature articles on significant topics. This year the *Annual Review* has been split into four main sections called commitment, joy of life, involvement and science. These four areas are the cornerstones of our promise of 'being there'. For only by being committed to taking the cause of our customers personally, by enabling people to experience the joy of life, by continuing to be involved with patients living, for example, the healthcare system, and by investing in scientific discovery, can we continue to be successful in our chosen therapy areas.

The *Annual Financial Report* is the document that fulfils the legal criteria for an annual report, and includes the full set of accounts and notes from the Novo Nordisk Group and the parent company Novo Nordisk A/S. The *Annual Financial Report* complies with the new Danish Company Accounts Act and accordingly the accounting policies have been changed in a few areas. The changes, which are described in detail on page 16 in the *Annual Financial Report*, have limited effect on the figures for 2004 and on comparative figures.

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